

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SENSORY DESIGN & TECHNOLOGY LTD	eScent mask for personal protective assurance: a human-centred approach to PPE in the post COVID-19 world	£100,695	£80,556
ANCHORED IN LTD.		£17,235	£13,788
THE IMAGINATION FACTORY LIMITED		£100,748	£80,598

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The panic around coronavirus has resulted in global demand for masks.

The trauma associated with COVID-19 has led to the deaths of many healthcare staff. Recent research published in Cell [1] suggests that SARs-CoV-2 infects cells of the respiratory tract with the nose being the dominant site from which lung infections begin. This opens new directions for future intranasal wearable therapeutic strategies that could reduce transmission of COVID-19 and other coronaviruses in the nose.

The challenge of the pandemic requires imaginative collaborations between disciplines and could benefit from an innovation that enhances the emotional and mental wellbeing of the population.

eScent is engineering a new movement in wearable, sustainable voice-activated scent dispensing. In partnership with IF/Anchored-IN, we are commercializing a product that seeks to calm people with a soothing aromatic atmosphere to boost the immune system, whilst improving on current protection provided by FFP3 masks.

The aim of this project is to take the current eScent dispenser (TR3) to an enhanced- mask demonstrator in relevant environments (TR6) so that it emits a safe and effective aroma whilst blocking SAR receptors as a novel answer to PPE for frontline workers.

eScent is a wearable pico-litre dosed delivery device that dispenses any liquid via sensors/app/voice-recognition software. It builds on 20 years of sensor-induced scent-release technology and textile research (Central Saint Martins/Cambridge University), projects with Philips, North Face, and support from Google, TransTech Labs. Protected by 5 patents, eScent unites sensing human emotion and dispensing counter-active wellbeing aromas to improve quality of life.

The psychological effect of our intervention should radically reduce the trauma of healthcare, transport, and emergency workers. Our route to market is via GENTEX Europe (NHS/Military PPE supplier), with interest expressed by the NIHR Brain MIC, and University of Cambridge Clinical School as a novel way to mitigate the psychological impact of the crisis. Although our idea is not an immediate solution, it is highly relevant for future coronavirus outbreaks. If an effective vaccine takes longer than expected, it is also valid for the current pandemic. The dispenser would deliver a cosmetically approved liquid (with safety data for skin/eyes) from inside a facemask/visor that nurses/receptionists/bus drivers or military wear as a deterrent/prevention "cloud" to curb the spread of viruses and reduce trauma.

Our technology establishes and maintains a localized "sphere" of detectible levels of scent (and other sprays) dependent upon user-context and/or the environment dispensed from a voice-sensitive wearable liquid dispenser. Future iterations will use mask data, ML technology to personalize treatment and care such that evidenced-based antivirals/aromas can be delivered once an AI system has detected an increase in stress (using voice analytics) or environmental changes. Scent delivery is triggered by vital signs from worn biometric sensors in a smartwatch (e.g. temperature, HRV, speech characteristics/commands, location, contextual data in hospitals/shops, public transport) and contained in "consumables" consisting of bio-compostable/refillable capsules (circular economy).

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

There is no mask that dispenses compounds in real-time to prevent COVID-19\.

\[1\].Hou et al.,\_SARS-CoV-2 Reverse Genetics Reveals a Variable Infection Gradient in the Respiratory Tract\_,Cell 182,1--18,July,2020

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Cynomi Ltd	WFH Cyber Risk Monitor	£217,500	£174,000

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

WFH Risk Monitor

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Visualist Technologies Ltd	Digital Not Digitised: The Creative's Virtual Show	£218,743	£174,994

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

We will research, design and develop a new communication system that helps creatives to showcase and transmit ideas more effectively and engagingly. Creatives are using the digital medium today to do fashion shows, makeup tutorials, cooking demonstrations, poetry readings and stand-up comedies. However, the videoconferencing experience has not been modernised to take into account how humans connect and communicate.

We will explore improvements to the video interface, and how video and voice communication can and should look like, feel like, and sound like. Specifically, we will look at the creative worker, and their need to engage and interact with their audiences, as well as audiences' desire to interact with one another.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PARANIMO LIMITED	Supporting the Mental wellbeing of key vulnerable groups whilst promoting sustainable economic recovery during Covid-19.	£107,094	£85,675
CARER SUPPORT WILTSHIRE		£0	£0
NATIONAL COUNSELLING SOCIETY LTD.		£0	£0
THE DISABILITY UNION CIC		£0	£0

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Paranimo is a Mental Health technology company on a mission to:

- \* Reduce the complexity of finding an appropriate UK Therapist using innovative matching technology.
- \* Increase the accessibility to, and facilitate the delivery of, private online talking Therapy to vulnerable people with existing and emerging Mental Health issues.
- \* Support the availability and employment of private Mental Health talking Therapists across the UK.

Covid-19 has had a detrimental impact on two key vulnerable groups: Disabled and their unpaid carers. Many disabled have been required to "shield" due to "clinically extremely vulnerable" (CEV) classification. 46% CEV adults have not left their homes since shielding began with 37% reporting a worsening of their mental health, rising to 68% if they have already been receiving Mental Health support. 40% of young unpaid carers and 59% of young adult unpaid carers say their Mental Health is worse since Covid-19. These two groups need urgent help.

Mental Health Therapy delivery is particularly needed to address rising concerns faced by these groups presenting with: Attachment issues, Generalised Anxiety, Health Anxiety, PTSD, OCD, Stress, Complex loss and grief, Bereavement, Trauma, PTSD, Depression, Self-Harm, Abuse and Domestic Violence.

The demands and limitations of shielding/self-isolation have made it practically impossible to access traditional face to face therapy during these difficult times. The existing pathways for accessing private Mental Health Therapy and support are both complex and confusing. It is difficult for people seeking support with limited knowledge to judge the competence of Therapists, whether by Therapeutic approach, expertise, qualifications or professional memberships. This contributes stress and anxiety to existing distress. When combined with the limitations of location-based availability, the chance of finding an appropriate Therapist is dramatically reduced.

Private Mental Health Therapists experience professional challenges limiting opportunities to offer services to greater numbers of clients. Delivery is location-dependent with Therapists selected by convenience to the Client rather than by expertise. Many Therapists lack online marketing knowledge to differentiate their services, with Therapists listing similar expertise, rather than particular experience and strengths. There is currently no suitable comprehensive online transition model for Therapists during Covid-19.

To solve these challenges, we are:

- \* Working in partnership with the UK's first Disability Union, Carer Support Wiltshire and the National Counselling Society, ensuring we can meet the needs of these two vulnerable groups.
- \* Creating an "all in one" Mental Health platform using a unique percentage matching system - simplifying the Therapist selection process for most vulnerable clients.
- \* Increasing Therapists' reach across the UK leading to equality of regional distribution of Mental Health support, sustaining income during Covid-19.
- \* Building a secure and accessible Therapeutic environment delivered over video - location is never a hindrance to accessing the Mental Health support people need.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

\* Therapists' qualifications are viewable, professional memberships verified.

\* Developing a Therapy credit model enabling external funding from charities and businesses to cover Therapy costs.

The platform can reduce complexity, increase accessibility and delivery whilst promoting a more equitable distribution of Therapeutic expertise which supports the Mental Health needs of vulnerable disabled users and their unpaid carers.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MELLIZYME BIOTECHNOLOGY LIMITED	Improving the production of a novel enzyme for Polyethylene (PE) degradation	£174,521	£139,617

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

The accumulation of plastics in the environment, especially in rivers and oceans, is a massive and well-known problem. Most of these plastics have purely alkyl chain backbones, which makes them recalcitrant to biodegradation. The aim of this project is to develop the high-level, secretory, recombinant production of an enzyme that we have discovered and patented and that can effect such a degradation, and to begin to scale up our process.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ASEPTIKA LIMITED	Active+me REMOTE RESPIRATORY RECOVERY: Digitally delivered support for patients recovering from non-COVID-19 respiratory exacerbations in the post-pandemic era.	£218,652	£174,922
Cambridge University Hospitals NHS Foundation Trust		£110,568	£110,568
WICKED MINDS LIMITED		£170,510	£136,408

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Aseptika Ltd, Wicked Minds Ltd and Cambridge University Hospitals NHS Foundation Trust are working together to support patients in their recovery of non-coronavirus-related respiratory diseases such as severe asthma, chronic obstructive pulmonary disease (COPD) and bronchiectasis. During the pandemic many traditional rehabilitation services have closed. **\*\*Active+me REMOTE\*\*** is a programme that uses connected monitors, a dedicated app and cloud services to provide a complete home recovery system (live exercise classes, exercise videos, remote monitoring, education, peer-to-peer support and dietary advice). Respiratory nurses and exercise coaches provide light-touch supervision for patients. This delivers an alternative to Pulmonary Rehabilitation (PR) classes and in-person Outpatient clinics.

One in five people in England has lung disease. Patients are often very tired and out of breath which stops them enjoying life. Many go to hospital when their symptoms get worse. This adds to the number of patients that the NHS cares for.

Pulmonary rehabilitation (PR) is a treatment that helps people to get fitter, walk more, feel less breathless and tired and manage their worries about lung disease. This means they enjoy life more and are less likely to go to hospital. People are referred by their GP/practice nurse or after a hospital stay for lung disease.

At PR, patients get supervised exercise and education about their illness. It is usually a group course, twice a week for 6-8 weeks in community halls/clinics with up to 16 patients.

Since COVID-19 many patients and staff have been shielding and face-to-face PR classes have stopped. Respiratory specialists had to find ways to run PR at a distance, e.g. classes via the internet with patients exercising at home. Many online courses do not take as many patients as face-to-face classes because it is more difficult for the person running them to keep an eye on everyone. Also, some staff were re-assigned to other community healthcare roles and could not set up remote courses. This means the waiting lists are getting longer.

Even before COVID-19 we knew that one-third of patients referred to PR did not start the course. Two important reasons were not being able to get to a class or not liking groups. It is important to have something else to offer patients.

So, respiratory staff need ways to run PR where:

1. Patients do not need to attend a class, and
2. Staff can deliver PR at a distance to more patients.

**\*\*Active+me REMOTE\*\*** is a ready-to-go solution for this. PR services which cannot develop an online course can put it into practice straight away. It can also help where staff have set up online courses because it enables patients to keep track of their own health, with the support of PR staff, without needing face-to-face contact.

In this project we will pilot **\*\*Active+me REMOTE\*\*** to evaluate and improve its performance with both respiratory patients and pulmonary rehabilitation staff.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

The results will help us prepare for a larger regional pilot to make sure the benefits are at least as good as traditional PR.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADAPTIX LIMITED	Veterinary Medicine: Bringing low-cost low-dose 3D imaging to the veterinary surgeons treatment room	£211,385	£169,108
University of Surrey		£43,646	£34,917

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project is to deliver a 3D imaging system for small animal use by veterinary surgeons (the 'Small Animal 3D' \['SA3D'\] system) which will be launched at the British Small Animal Veterinary Association Congress 25-28 Mar 2021\). The system will be a low-cost low-dose (~same as existing 2D imaging systems) portable system that can deliver 3D images, whilst avoiding the need to purchase a CT.

The innovation is to use 'Digital Tomosynthesis' ('DT') to create 3D images in veterinary applications. DT is routinely used in medical imaging (for instance in breast screening) but is currently only deployed in fixed high-cost installations. The innovations are:

**\*\*Innovation 1:\*\*** Deliver 3D imaging in a form-factor that can be deployed on a standard operating table in an existing veterinarian's treatment room or operating room without modification (including the use of single-phase power). SA3D would operate within the same radiation protection regulations and have similar running costs as 2D. Operation of SA3D can be by the vet or nurse without the need for specialist training or dedicated specialist technicians.

**\*\*Innovation 2:\*\*** Deliver 3D imaging that can be moved within the veterinary practice to enable 3D radiography to travel to the patient, rather than to take the patient to the 3D radiography. SA3D would be portable outside the clinic, enabling quick access to imaging diagnostics to patients who can't travel, cannot be moved, or need urgent access to imaging.

**\*\*Innovation 3:\*\*** Create a new business model (for veterinary imaging) that creates an 'archive' of data to which Machine Learning can be applied to allow new computer-aided diagnostic tools to be developed and deployed to users. It is envisaged that incidental findings could be automatically identified for the clinician to review, such as identifying tumour metastasis when investigating a primary tumour.

**\*\*Innovation 4:\*\*** Use modified acquisition protocols in conjunction with advanced image processing and mathematical techniques (compressed sensing) to allow enhanced imaging such that the system can acquire images of sufficient quality for extraoral dental imaging with a large detector with large pixel sizes. This will avoid the need for multiple intraoral images to be acquired and avoid the need for the vet to acquire a veterinary intraoral system.

There will be value in environmental terms of reducing the need for vet practices to acquire a CT or (if no CT is on-site) for vets to refer patients to other centres for imaging.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DRAGONMOBILITY LTD	Autonomy for disabled people: Incorporating the lessons of COVID-19 into powerchair design	£287,640	£172,584

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*Dragonmobility\*\***

Over 2,000 disabled people's lives have been transformed by the pioneering work carried out over the last 39 years by Dan Everard and his family and colleagues on behalf of people with severe mobility impairments.

Since 2005 this has been through a not-for-profit company called Dragonmobility Ltd. According to its committed users in the UK and abroad, Dragonmobility powerchairs out-class other powerchairs in the way they enable them to act, think and feel confident in a mainly non-disabled world. The aim is to give users freedom to access largely unadapted accommodation, be agile enough to gain a good education, contribute positively in the workplace and live normal family lives, taking responsibilities appropriately with minimum support from others or the state.

This has been achieved by attention to details that are individually customised in close collaboration with potential users. It is also a result of Dan Everard's expertise in analogue control systems, which sets these chairs apart in terms of the instinctive and natural movement they allow. The design is holistic, enabling vertical as well as horizontal movement, from ground level upwards.

Dan has been designing similar chairs since 1981. He received a Tobie award from the electronics industry for this in 1984, and has been nominated for international prizes for his work. The business is now directed by his daughter, Ruth Everard, herself a Dragonmobility powerchair user. Dan is moving towards retirement and passing on his expertise to the younger generations. This project is the pre-cursor to further development to fit the technology to future-ready engineering training and practice, to employ young engineers to carry Dan's work forward.

### **\*\*The Project\*\***

The project to be funded by Innovate UK will help the company overcome the significant challenges to its operation caused by the COVID-19 crisis. The experience of continuing to support its clients during the pandemic has focussed the company on the new circumstances of the disabled people Dragonmobility serve, many of whom have had to shield. Significant aspects of the design are to be updated using new technology and manufacturing techniques, to reduce their carbon footprint, reduce cost, improve reliability, facilitate even more client self-sufficiency and avoid too much face-to-face contact being required, while retaining all the established features and benefits of these sophisticated chairs. Innovate UK funding will allow opportunities for improvements in quality of products and service to be grasped, to compete more effectively as a UK manufacturer within the worldwide marketplace.

The project is expected to take up to 9 months, and will be carried out concurrently with separately funded continuation of manufacturing, supply and service of the current products. It will lay the groundwork for further developments to allow the company to restructure and launch a new support and training organisation alongside the production of the new models. The expertise gained over many years will be shared widely within the therapeutic professions who support and advise disabled people to continually improve practice in the supply of and seating for powerchairs.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HESTIAN GROUP LTD	COVID-19 and Carercard - Adapting for Safer Payments Across All Care and Support Providers	£171,647	£137,318

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*COVID-19 and Carercard\*\* - Adapting for Safer Payments Across Care and Support Providers\*\***

Behind the project title is a simple ambition. The sort of service our team had wanted, when organising care for a loved one to live well at home for longer. 'How can you organise safe and easy housekeeping payments, when a loved one is being looked after, and you can't always get there'?

We started with a safe and easy prepaid card designed for care - Carercard, a Mastercard(r) prepaid card, for use wherever you see the 'Mastercard Acceptance Mark'. With support from **\*\*Innovate UK\*\*** this can be expanded into a digital platform with virtual cards, screen payments. This adds a facility for other organisations to adapt and use our service to assist their own customers in a more tailored way. One learning we had from care is how each family likes to organise things in ways that work best for their loved ones. Care providers and councils are able to improve access to Carercard.

**\*\*"The issues we found ourselves\*\*"**, said CEO William Annandale, **\*\*"was how best to help a carer who arrive to help our loved ones, especially when we could not always get there\*\*"**. A loved one is doing fine, then a health crisis, and discharge with a care plan, and you the family need to make changes to help a loved one live well in their own homes for longer.

Over 10 million of us, in the UK, are involved in aspects of care planning. **\*\*"We thought, if we can help get housekeeping at home working well, it takes one pressure away from care providers\*\*"**, said William. That lead to Carercard and, now, it leads to a digital platform for partner organisations who know their own customers' needs well to tailor what works best for them.

The Sustainable Innovation Fund helps this solution become available faster, while COVID-19 is causing pressure on our care and volunteer services. Hestian already works in a sustainable way. Sustainability is part of the company ethos. It starts with helping families to sustain the wellbeing of a loved one, at home. It extends to better choices for household budgeting. Sustainability also informs the operating decisions Hestian makes. As does inclusivity. Our market offering is 'all age and all conditions' backed by a workforce pledge to build a team with diversity in all aspects and able to bring their own work-life balance, post Covid.

As a sign of both the need and of how Carercard delivers a better option, here are two insights that we really appreciate;

The MD at the registered care agency in our recent pilot said **\*\*"Carercard is a great solution we will be encouraging instead of cash".\*\*** The platform helps us to widen access.

A recent customer said **\*\*"I have been really impressed with your support and the smooth operation of card use. I have experience of another card that I used for our carers, I have to say that Carercard is significantly easier to use".\*\***

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ZECORA URA THEATRE	DATUM - SMALL DATA MINING	£174,472	£139,578
BDS CREATIVE LIMITED		£49,873	£39,898
University of Greenwich		£61,779	£49,423

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

DATUM is a game you play in Shopping Centres by following audio prompts on your mobile.

DATUM seems to know exactly what you're doing as you move through public spaces.

DATUM is a locative urban game you can experience in a group of 1-3 players. As a player, you are both the protagonist and the audience of your own experience. Familiar locations such as a car park or a café in a food court suddenly become a film set where a missing person case unfolds. Your time is limited. You're not sure who is in and who is out. Unless you reach your objective, you will never know all the details.

You are the player - a data miner. You are also a shadow - by following someone else's footsteps. You have simple instructions. Your time is limited. You're in a public space. Others can see you. You are close to your objective. Then the objective is not what you thought it was. You are not where you thought you were. The game has changed. You can keep playing, but you can't start again. Because you know too much now.

DATUM - Small Data Mining will be led by ZU-UK in partnership with body\data>space, and the University of Greenwich.

Founded in 2001, ZU-UK is a BAME-led award-winning independent theatre and digital arts company based in East London. Driven by an artistic partnership between Jorge Lopes Ramos and Persis Jadé Maravala, ZU-UK creates interactive experiences using performance, games, and technology. They can happen anywhere including on your phone, in your house, on a stage, in a shopping mall or a field. ZU-UK believes in the transformative power of collaborative human experience. We set out to purposefully give people tailor-made experiences that bring strangers together in playful, unexpected ways to create alternative realities. Recent achievements include: Rio de Janeiro Award for socially-engaged innovation in the creative industries, Prix Ars Electronica (Honorary Mention for Hybrid Art), Herald Angel Award, and finalist/nominee for innovation by Total Theatre Awards, Oxford Samuel Beckett Trust, The Space Award.

Based in East London, BDS Creative Ltd - body>data>space are a pioneering interactive creative design collective who have advocated for the living body to be at the heart of the digital debate since the early 1990s, creating collaborative outputs between performance, architecture, new media and virtual worlds. Ghislaine Boddington and Tadej Vindis of body>data>space work with collective members to enable public engagement in virtual and physical blended environments, examining the highly topical evolution of our future multi-selves through gesture and sense interfaces, biometrics, augmented and virtual realities and embedded digital body connectivity. This research points to the rapid blending of the virtual and the physical body and future collective embodiments. The collective regularly produces, curates and presents international group projects across Europe, Asia and the US, and were awarded the IX Immersion Experience Visionary Pioneer Award by Society for Arts and Technology (SAT) in 2017.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GENETIC MICRODEVICES LIMITED	Validation of QbQ Technology for SARS_COV_2 Antigen & Anibody Testing	£218,748	£174,998

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The onset of the SARS-COV- 2 pandemic and subsequent lockdown created significant economic and social disruption worsening inequality, unemployment, community tensions and straining the NHS. The easing of the lockdown, currently underway, has reinforced the need to prevent an increase in new infections, to avoid another lockdown with its adverse economic, educational and social effects.

One key ingredient of the solution is cheap, fast, accurate, widely distributed, casual testing, at schools, surgeries, hospitals, nursing homes, pharmacies, testing centres, sports/entertainment events and the work place. Existing testing technologies are not suitable for these needs. Existing tests such as qPCR and antigen, fail to tick critical boxes of performance. qPCR takes long and requires expensive reagents. It is not ideal to be used at the point of care. Antigen tests are not sensitive enough and often the specificity suffers.

Genetic Microdevices Ltd has the best technology in the world for detecting both active infections and past exposure to infection. We are proposing a 9 months project to validate two serological tests:

\\*A Test, to check past infection

\\*A Test to check active infection

Our technology, the QbQ (cubic) can handle whole blood and swab samples, can work with minimal amounts of sample (one droplet), features very high sensitivity, 5-15 mins running time, high throughput, adaptability to mutations and low running costs and gives quantitative results. QbQ is based on a miniature test chip and eventually the whole Reader + Chip can be of handheld size. It benefits, in terms of cost and scaling up for use, from being based on a platform technology, that utilises standard materials and components, and that requires small amounts of abundant, inexpensive reagents per test. Our technology is the only one that combines all the right features, to allow it to provide cost effective, accurate, reliable tests that can be widely deployed in venues ranging from hospitals, clinics, surgeries and clinical trial centres, to universities and schools, to workplaces, and entertainment/sports facilities and are ideal for , democratised test to be deployed everywhere, at schools, in the workplace and in hospitals, to monitor accurately actively infected people and people with past infection who may have developed immunity. We believe that our technology can be a key part of the solution to reversing the disruption and exclusion caused by this and any future pandemic.

Our proposal if granted, will support GMD's efforts to validate its technology that will help alleviate the pandemic's impact on the UK. By partially replacing the shortfall in funding caused by the pandemic it will enable GMD to replace the loss of a key member of the team allowing it to continue the timely planned development and validation of an innovative diagnostic platform for the SARS-COV-2 virus. Finally our technology is well suited to take part in green circular economy, as our disposable chips can be recycled to plastic or to fuel, using existing UK services.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CRISPIN ORTHOTICS LTD	Integrating Scaleable Additive Manufacturing Technology to Improve Sustainability in the Manufacture of Orthotic Products	£114,112	£91,290

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Crispin Orthotics are working to create an efficient, effective and sustainable process for the manufacture of custom made orthotic products.

Current systems used in the provision of made to measure orthotic products are invasive, inconsistent and create high volumes of non-recyclable waste.

Our project uses the most effective portable 3d scanning systems to provide anatomical measures, rather than using plaster casts. These scans are then used to create a virtual representation of an orthosis which can be presented to the clinician and patient before manufacture to ensure it meets expectations.

Once approved, the virtual representation is manufactured as a physical orthosis using a functional 3d printing system to provide a device which is:

- \* Exact
- \* Functional
- \* Comfortable
- \* Cosmetic
- \* Lightweight

Additional environmental benefits include:

- \* A reduction in non-recyclable material waste associated with traditional manufacturing methods
- \* Time from scan to manufacture is reduced due to the removal of transport costs which also benefits CO2 reduction.
- \* A reduction in post manufacturing processes reducing energy costs associated with production

The integration of digital scanning technology provides the potential to for the process to be utilised globally and as a result providing an effective export market.

Our project is to further explore efficiencies in the design and manufacturing process to create products which are more cost efficient than traditional devices.

We expect demand for our service will increase during post Covid-19 reinstatement of Orthotic clinical services due to the time efficiency benefits that this system can provide. The innovation funding will enable us to achieve a fast track to completion by increasing both our project time resources and financial investment allocations and ensure we can make this new and innovative technology available to Orthotists and their patients upon completion.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
COACHING PRINCIPLES LTD	GoalShaper Sustain	£193,749	£154,999

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has dramatically accelerated remote working which may become the "new normal". UK Productivity fell 0.6% on average and output per worker was 3.1% lower as home working took hold in March 2020. Increased homeworking leads to a number of advantages (improved employee retention, staff motivation and potential productivity gains) and disadvantages (decreased morale, challenges in staff development and performance monitoring). Consequently, the effective management of remote workers is a new and pressing challenge if the UK is to overcome the productivity decreases that were present even before the pandemic.

Further, as homeworking increases, the burden of sustainability increasingly shifts from workplace corporate actions to individuals at home. Despite reductions in commuting related transport emissions, an average employee homeworking year round produces 80% more carbon than an office worker (WSP,2020). Consequently, companies and their remote employees need training and support to address these negative impacts and encourage more sustainable behaviours.

Coaching Principle's (CP) GoalShaperSUSTAIN project is designed to address both these challenges and deliver more sustainable remote working productivity aligned to both individual needs and corporate productivity and sustainability goals. GoalShaperSUSTAIN, an API integrated Enterprise level smart application will meet these needs by aligning both individual and corporate development objectives integrated with sustainability modules translating corporate sustainability goals to individual actions with associated training and reporting functionality.

In doing so, GoalShaperSUSTAIN will foster

- A sense of individual responsibility, ownership and understanding of the contribution employees make to their organisation in terms of both environmental sustainability and overcoming the impact of COVID-19
- Opportunities for individuals to understand and develop more sustainable behaviours and support the UK in addressing pressing climate change targets
- Opportunities for managers to have meaningful developmental discussions with staff in real time vs annual appraisals
- Performance review discussions that are structured, goal oriented & evidence based
- Transparency across the organisation and teams supporting equality, diversity and inclusiveness goals

GoalShaperSUSTAIN will enable businesses to not just weather the challenges of COVID-19, but to emerge stronger and more sustainable than ever.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ALCHEMIE TECHNOLOGY LIMITED	Low carbon waterless digital textile dyeing - enabling UK textile manufacturing	£218,600	£174,880
STRETCHLINE (UK) LIMITED		£42,758	£34,206

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The textile industry is one of the most polluting on the planet. It is responsible for almost 10% of global carbon dioxide emissions and is the \#2 source of chemical pollution; mainly due to the emission of dyestuffs and process chemicals. The energy consumption of the textile industry is attributable to the large volumes of heated water used in commercial dyeing processes, which have changed little in the 70 years since they were invented. This results in textile dyeing contributing to approximately 3% of global CO2 emissions - similar to aviation.

As consumers and governments have recognised these issues, there is now significant and urgent pressure on the textile industry to change manufacturing methods to become more sustainable. Manufacturing methods are out-dated, with manufacturing located in low-cost countries, where energy intensive, polluting processes have been tolerated for many years. Severe cost pressure has ensured minimal investment in manufacturing technology and insufficient consideration of the local and global environmental impact.

The textile industry is changing, as governments recognise the impact on their citizens of both climate change and chemical pollution. Consumers are also recognising the issue and demanding that brands take action to become more sustainable and address the accelerating effect that "Fast Fashion" has had on overall consumption. Major brands are now focusing on sustainability and urgently seeking new methods to manufacture their products that are less carbon intensive and reduce overall impact on the environment.

To address this need, Alchemie Technology has developed a breakthrough textile dyeing process - Endeavour - which is aiming to revolutionise the process of textile dyeing by eliminating waste water and as a result, reducing the energy required for dyeing by over 85%. This will make a significant global impact; since textile dyeing currently accounts for around 3% of global CO2 emissions, implementation of the Endeavour process will have a significant effect on global CO2 emissions. The Endeavour technology also has the potential to make even more impact in the long term; the carbon footprint of textiles is expected to increase to 25% of the global total by 2050 due to increasing consumption. Endeavour, if implemented worldwide by 2050, would eliminate ~8% of the global total - comparable to eliminating the emissions of Europe.

Stretchline is the world's \#1 producer of narrow-web elasticated fabric and a leader in sustainable textile manufacturing. Headquartered in the UK, Stretchline is a global group that manufactures textile products worldwide, including advanced manufacturing operations in the UK. Implementing Alchemie's Endeavour technology has the potential to revolutionise its operations with a dramatically more sustainable, flexible manufacturing platform.

The aim of this project is to demonstrate that the Endeavour Waterless Smart Dyeing process can deliver dyed fabrics that meet Stretchline's requirements. This will enable the implementation of a breakthrough low carbon dyeing technology that can deliver in-market manufacturing capability with exceptional flexibility. This project will also enable manufacturing in the UK of high value textile products, including medical textiles for COVID-19 facemasks.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TENDED LTD	Minimum Separation Distance	£258,858	£173,435

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

As a safety technology company, Tended is committed to developing solutions to address some of the most pressing safety challenges that employers face with keeping their workforce safe.

The safety of both employees and the wider public has been severely affected by the COVID-19 pandemic. Employers have a responsibility to protect their workforce and provide a safe working environment, especially during the current climate. An outbreak in their workplace can trigger a complete shut down while the virus is contained, which can be damaging to company reputation and put both employee and the general public's lives at an unnecessary risk.

However, it can be challenging for employers to ensure their workers are maintaining a safe distance, particularly if their workplace is not designed to keep people apart.

Tended has developed an innovative social distancing wearable that alerts users if they come within a set distance of their colleagues. Using ultra-wideband technology, this solution ensures high precision, which is vital for an effective solution. Tended is also developing additional features, including collision avoidance, hazard reporting and evacuation alarms. By expanding the solution to address further critical safety issues, Tended can support the longevity and value of our safety solutions, both during and beyond the COVID outbreak.

Tended's current social distancing solution is being trialled across different industries including utilities, logistics, manufacturing and construction, and requires connection to a smartphone. For this project, Tended will develop cellular functionality to remove any reliance on additional hardware. Not only will this improve the experience for the end user and support client needs, it will also increase uptake as social distancing can be maintained across working environments with different needs and challenges.

By reducing the hardware required, Tended will also be able to help to reduce the environmental impact, as 1.5 million tonnes of electrical waste is thrown away in the UK each year alone. Incorporating cellular functionality into our safety solution will ensure that no unnecessary hardware is required on a short-term basis, reducing our impact on the annual wastage.

Beyond reducing hardware waste, Tended has been able to re-shore our supply chain from China to the UK. This allows us to reduce the significant environmental impact associated with transportation, as well as giving greater visibility and control over safety standards and manufacturing wastage. Reshoring to the UK manufacturing industry also allows Tended to contribute to an industry that has struggled since the beginning of the outbreak due to a 26% to 50% fall in orders.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACOUSTIC SENSING TECHNOLOGY (UK) LTD	Innovative Sensor Array for Sewer Survey (ISASS)	£225,824	£173,884
University of Sheffield		£74,670	£74,670

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### Innovative Sensor Array for Sewer Survey (ISASS)

Sewer systems around the world are ageing and their performance is deteriorating. More frequent sewer blockages and collapses result in raw sewage flooding into houses and spilling into rivers more often and with increased severity, causing much damage, distress and pollution. Water companies need more information about their sewer systems so that they can plan where and when to carry out detailed inspection, cleaning and repair. Under Ofwat regulation, water companies in England and Wales have committed to meeting stretching flooding and pollution targets. If they succeed, they will gain financially to recognise the benefit that the communities they serve have benefitted from better service. If they fail, they will suffer financial penalties. The problem they all have to address is what to do and where to do it to control their sewer systems to meet and exceed the targets. The traditional CCTV inspection is slow and costly, which has resulted in only a small percentage of sewer system ever having been inspected even once.

The use of acoustics for sewer survey has been developed in the UK over the last 10 years and provides a means for water companies to survey more of their sewer networks quickly and cheaply, and to do it more often. In the UK, Acoustic Sensing Technology (UK) Ltd has been providing the SewerBatt system since 2013. The time is now right to bring together the experience gained since the company was established with the expertise of world-leading researchers at the University of Sheffield to develop the next generation of sensors.

ISASS will use acoustic numerical simulation to produce digital prototypes of sensor arrays and simulate their performance in digital representations of many different configurations of sewers and the defects they contain. Bypassing the need to build multiple physical sensor arrays and test them in many different real, live, sewers will dramatically accelerate the delivery of the optimal next generation sensor. Once the design has been optimised by simulation the final design will be produced in the metal and field tested to confirm its performance.

Finally, the ISASS project will also examine to proof-of-concept stage the feasibility of developing a rapid acoustic simulation engine that could be used in the field to assist operators to interpret the acoustic responses from the sewers they are surveying.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACTIVATEC LTD	Process development for a sustainable and unique cosmeceutical ingredient	£218,134	£174,507
University of Nottingham		£65,643	£65,643

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Consumers are greatly concerned about cosmetic pollution and the use of synthetic ingredients which can cause skin irritation or allergic reactions. However, the use of unrefined natural ingredients does not always give the efficacies required. Alternatively, biotech active ingredients are a new market with strong potential, as these ingredients can have a high activity efficacy and are derived from clean and sustainable sources. Moreover, as COVID-19 tightens its grip on health systems and economies around the world, the global pharma and biotech sectors have a vital role to play.

Ectoine is a cyclic amino acid, whose function provides osmotic balance to a wide number of halotolerant bacteria. One of its inherent properties is as a highly effective stabilizer of enzymes, DNA-protein complexes and nucleic acids. In an attempt to harness these attributes, various industries have begun to market Ectoine as a novel active component in health care and cosmetics products. Ectoine has been demonstrated as being capable of protecting the skin from dryness, UV irradiation and positively influence lung inflammation associated with chronic obstructive pulmonary disease. This biotech ingredient is one of the most valuable products synthesized by microorganisms, retailing in the cosmetic and pharmaceutical industry.

Activatec, an R&D-based start-up in Nottingham, will collaborate in a 9-months project with the University of Nottingham to develop an innovative technology to produce Ectoine by utilising a microbial consortium. They will validate the technology with a multi-litre fermentation system, which will produce small batches of the end-product and generate data to allow the development of large-scale production. This innovation will provide a cost-effective manufacturing process of the valuable compound which can be formulated into skincare applications. Alongside this, the potential of the technology both technically and business-economically will be evaluated.

This project will be a driver towards the commercialisation of a biotech ingredient for the first time in the UK that will meet market requirements and reduce the carbon footprint of the cosmetic industry. Following the successful application of this Ectoine in the skincare industry further markets will be explored, i.e. pharma and healthcare. Furthermore, this project will boost Activatec as a business during this COVID-19 outbreak creating new business opportunities, sustainable jobs and growth in the local Nottinghamshire area.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
REIO ONE LTD	Dynamic multivariate optimisation model based mobile-app using autoML machine learning algorithm made for shift workers in retail	£169,567	£135,654

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Shift management is complex and is subject to many constraints and interdependencies. Shift working is utilised across industries as large as the NHS to the retail, military, government, and many other sectors. Current solutions only provide tools to place shifts on calendars; they do not address the complexities directly, instead relying on human intervention to provide the decision-making and management components e.g. moving a shift around.

We intend to solve for shift working patterns by applying a linear optimisation model, similar to how the travelling salesman problem was used to solve distance travelled by a sales rep and hence massively reduce carbon footprint and cost to the employer, our project will create software that combines a mathematical approach that is impartial, eliminates subconscious biases, uses machine learning algorithms (autoML) and live data to dynamically update the linear optimisation model, enabling AI-generated solutions to the shift scheduling problem.

The project will thus enable software to replace excel and other rudimentary gut feel rota schedules where thousands of people are involved, enable software processes to interact to request shift changes, update hours, make more or fewer hours available, switch shifts, and deploy the optimal staff combinations for the best business outcomes.

Replacing the person responsible for shift scheduling with an AI-generated solutions will be akin to removing the taxi dispatcher, the way that Uber has done with technology. Anticipated benefits from the project include greater efficiency and performance; reduced overheads; reduced stress and anxiety; improved service for customers and therefore improvements in reputation; and increased fairness (eliminating subconscious bias, for example).

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HBXL GROUP LIMITED	Using ML/AI to fast-track SME construction digitisation adoption to improve UK building productivity	£216,950	£173,560
nCircle Tech Pvt. Ltd		£79,261	£0

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*Backdrop:\*\***

UK building firms have been directly impacted by Covid-19, with their workloads and management teams disrupted along with increasing costs due to materials/labour inflation and Covid-Secure measures.

The project aims to optimise UK SME building firms, making significant productivity and cost savings using Machine Learning and AI applied to a real-world problem.

### **\*\*Problem:\*\***

Every year hundreds of thousands of houses, extensions and small industrial projects are commissioned by clients, with Architects/Designers preparing drawings on varying CAD systems or by hand.

Building firms are then typically provided with building plans as PDFs for quotation and construction, typically with 3-5 builders tendering for the same project. The result is millions of tenders being produced with only one successful candidate per project, wasting millions in £cost and hours of tender preparation time.

Consequently, in the face of this financial risk, estimates are produced in haste, resulting in poor outputs to subsequently digitally manage successful tenders.

What is needed is a software tool to assist builders easily ascertain direct from the building plan all labour and materials, all associated costs and prepare a detailed project plan, reflecting the content of the work and the builders own resources, including all associated process management and documentation, ready to efficiently construct the building.

### **\*\*Solution:\*\***

Machine Learning and AI (ML/AI), combined with HBXL's existing software can solve this problem with funding.

The applied ML/AI project vision is to speed up the process of creating digital representations of all entities (floor, walls, roof and fenestration), and infer the entities type and geometry from the plan.

The ML/AI will then pass all entity data to HBXL's existing software, linking to specification, estimating, project planning and health & safety management systems.

The resulting output can then be shared amongst and utilised by the entire project team in HBXL's existing construction management software and soon to

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

be released cloud-based Construction Cloud.

**\*\*Why fund this innovative project?\***

This innovative project addresses Government's twin goals outlined in the Industrial Strategy Challenge Fund Construction Sector and AI Sector Deals, focusing on Digital and Artificial Intelligence approaches to design, construction and management.

This timely approach will automatically digitise the entire construction process for smaller projects, saving days of preparation time on each project and produce at least 5-10% in productivity growth during actual construction (ONS, 2018).

The project has the potential to transform the way digitally excluded less tech-savvy, time pressured SME builders engage with a digital approach, delivering easy-to-use tools which will save them large amounts of time whilst simultaneously improving speed of delivery, quality and sustainability.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DE GRAFT MANAGEMENT LTD	Developing an AI platform to automate remote property & asset management during and post COVID-19 in Kenya	£106,364	£85,091
Vertex Hub Group Limited		£15,947	£0

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

McKinsey & Co (April 2020) report that COVID-19 has precipitated permanent changes in the property industry globally. Knight Frank's Africa Market Pulse Survey 2020 predicts a 70% post COVID-19 increase in remote working and social distancing in the sector which will become the norm, reducing density in commercial spaces.

COVID-19 has changed the way our clients work and has accelerated their need for secure and centralised cloud technology.

**\*\*De Graft Management (DGM)\*\*** are Property & Asset Management software specialists with 25 years' experience developing software in the UK and Africa. We have been working with banks, insurance and property companies and government in Kenya who do not use technology to manage buildings and physical assets, are struggling with manual systems and want to improve efficiencies and reduce costs.

DGM have engaged with end users in Kenya since 2018\ . During COVID-19 we have been unable to travel to Africa, however we continue to work with our clients using remote digital collaborative tools. COVID-19 has changed the way we and our clients work, accelerating their need for secure and centralised cloud technology.

In direct response to client feedback, we are configuring and testing a prototype AI machine learning platform to help our clients recover from the effects COVID-19 has inflicted on the management of their buildings and assets.

We have carried out detailed stakeholder analysis and are working with a sample of clients to specifically address COVID-19 related pain points in managing buildings and assets. We have identified the following requirements:

1. Managing and maintaining empty or part empty buildings; critical maintenance issues to keep buildings running and securing valuable assets.
2. Remote property management for regular, online contact with tenants, landlords, owners and suppliers, to reduce the time spent managing issues, payments, requests and feedback
3. Renegotiating and recording leases and contracts to compensate for reduced usage
4. Negotiating and logging discounts and concessions for suppliers, tenants and landlords for rents, service charges, ground rent, business rates and utilities
5. Managing solid waste and related service providers to track collection and disposal of residential and commercial waste
6. Safeguarding buildings by monitoring hygiene and maintaining shared spaces, cleaning supplies and cleaning providers
7. Tracking adequate staff PPE levels are maintained

During this project we will configure the technology to enable users to complete 80% of their Property & Asset Management administrative tasks remotely, reduce costs and support their recovery post COVID-19\ .

Environmental impacts will be:

\* Reductions in emissions via improved building management efficiencies, reduced commercial buildings usage and fewer commuters

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

\* Controlled waste management improving public hygiene, health and air quality

We will also address Sustainable Development Goals (SDGs) 8 and 11 by creating local employment and entrepreneurship opportunities and supporting least developed countries through technical assistance in building management.

We will also plan the commercialisation of the technology across Kenya, East Africa and Africa.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EMU ANALYTICS LIMITED	Planes, Trains (and Automobiles!)	£115,241	£92,193
FERROCORP UK LIMITED		£7,783	£0
PINKFROOT LIMITED		£42,772	£34,218

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Planes, Trains (and Automobiles!), aka PTA is an innovative data-driven software solution led by two leading UK micro-SMEs, Emu Analytics and Plane Finder, and including as a third partner, Ferrovial (a major shareholder in several UK airports including Heathrow, Aberdeen, Glasgow and Southampton).

The solution is designed to use data to analyse and predict delays across rail and air transport, to aid airports in safely and confidently managing passenger journeys to and from the airport, specifically by rail (the most sustainable means of reaching the airport) and using real-time location data from both aircraft and trains to better provide guidance and strategy that reduces the potential for passenger congestion, bottlenecks and dwells times at railways stations and airports.

This capability will help airports adhere to recent Government guidance on managing multi-modal passenger journeys post COVID-19, and help restore passenger confidence in two transport sectors that have faced significant impact from the pandemic and lockdown, namely rail and commercial aviation.

The project's three objectives are:

- \* To enable Airport operators to more safely manage passengers who arrive / leave by rail in a post COVID-19 environment
- \* To encourage passenger confidence and uptake of the most sustainable means to travel to the airport (rail)
- \* To promote passenger confidence in the resumption of train and air travel, aiding two heavily COVID-19 impacted economic sectors.

Only the two SMEs are seeking Innovate UK funding, as Ferrovial will cover all its costs of involvement itself, and will work with the project in aiding and implementing a trial of the solution within its airports.

Emu Analytics is a leading provider of innovative real-time data analytics and visualisation software, providing its services to many large infrastructure, transport and smart city operators, whilst Plane Finder is one of the world's leading providers of real-time aircraft movement and position data, with multiple airlines and over 1 million monthly active users following aircraft movements on its mobile apps and website.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LIBRARY OF THINGS	Library of Things: Replication Playbook for green, inclusive high streets activation	£141,622	£99,135

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In the context of struggling post-lockdown high street businesses and jobs, the climate/ecological emergency and systemic inequalities, Library of Things (LoT) is seeking funding for a project that increases its capability to be a green, inclusive high streets activator.

### **\*\*About Library of Things\*\***

LoT helps people save money, reduce waste and activate their local high street by:• affordably renting 50 quality products like Bosch drills, Stihl strimmers and Brother sewing machines from kiosks in high street hubs like event spaces or second-hand shops• delivering training programmes for skills like DIY, repair & sewing with local people

### **\*\*How it works\*\***

1. Hear about LoT from a friend, in the press/social media or just walking by
2. Browse the website to reserve products. Pay-per-day to rent the product-- just 5% of the cost of buying it!
3. Collect and return products from local self-serve kiosk. Find it in a Host Hub on your high street eg. events space, second-hand shop. Be assured that products are regularly cleaned/ maintained by trained professionals
4. \[COMING SOON VIA THIS PROJECT: View your community's impact and join skills training programmes\]

Having developed a replicable model that is now launching and operating in Host Hubs across London, and having received 300+ requests from businesses and communities in other cities, LoT is planning its expansion to high streets across UK cities like Bristol, Birmingham, Manchester etc.

### **\*\*The project\*\***

To enable this expansion to happen faster, more viably, and more impactfully, LoT wants to build a \_Replication Playbook.\_

This is a set of three pieces of development for LoT's software:

1. Heatmaps to ensure communities that want a LoT can self-identify, and to help LoT's team identify hotspots of community interest and potential Host Hubs in new cities
2. Live Impact Dashboards to clearly communicate to users and Host Hubs the economic, community and environmental impact of LoT in their neighbourhood
3. Digital Skills Training Module for LoT users, in order to • facilitate product rental through increased skills/confidence;• reduce programme delivery costs to LoT, making the skills programme viable at scale;• increase the impact: unlocking greater numbers and diversity of participants, and creating more local jobs. **\*\*Why this helps COVID-19 recovery\*\***

Many high street businesses and jobs, struggling even pre-pandemic, are now in tatters. 20,000 shop units that closed in lockdown won't reopen. In the first

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

half of 2020, UK retailers axed [24,000+ jobs][0]; experts warn this is the 'tip of the iceberg'. High streets urgently need innovative services creating jobs/footfall-- plus reskilling programmes for unemployed.

Through this project, LoT will:

- increase revenue/ footfall to high street community hubs by 50% against pre-lockdown levels-- to 7500 extra visits and £6000 revenue/year.
- involve communities in the expansion, impact and skills development of its own service, setting the precedent for other high street services to do the same at this key moment of transition
- COVID-19 has also increased carbon-intensive, wasteful behaviours with Amazonsales surging to \$11,000/second and increased single-use packaging/PPE consumption. It's more important than ever that we scale impactful waste prevention.

[0]: <https://www.retailgazette.co.uk/blog/2020/07/over-24000-jobs-scrapped-due-to-retail-administrations/#:~:text=New%20research%20has%20found%20that,collapse%20of%20some%20major%20businesses>.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PLASTIPRINT 3D LTD.	Development of a Low Cost Metal 3D Printer	£151,072	£120,858

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

We have experimented with a brand new technique to 3D print metal parts. We are seeking funding to develop a working prototype with the final aim of taking the technique to market. Current 3D printers that produce metal parts retail from £100k upwards. With this new technique, we could produce a machine that could retail for significantly less making the technology accessible to a wider market.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CORKSOL UK LTD	Thermally Augmented Cork-based Thin Insulation Coating (TACTIC)	£141,645	£113,316
Teesside University		£37,234	£37,234

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The TACTIC project will take the existing CorkSol product Thermocork, a sustainable cork based insulating material and reformulate it with nano additives to improve its thermal performance. Thermocork is easily and cost effectively installed and can be used to insulate hard to treat houses. Around 7.7 million UK houses are uninsulated, solid wall construction dwellings and many residents in these houses suffer from fuel poverty, meaning that they struggle to heat their homes due to high fuel bills, caused by heat loss. People in fuel poverty are more likely to suffer underlying respiratory health issues, which increases the severity of viruses such as Covid-19. Providing a cost effective solution to poorly insulated houses will improve the underlying health of a large proportion of the UK population.

Covid 19 has also had a significant impact in the construction and home improvement industry. The private sector housing repairs and maintenance market saw a 39.8% drop in the three months to May 2020 as a result of the Covid pandemic. Providing a new innovative material that can be used to insulate hard to treat housing will help generate a new market opportunity for both private homes and also social housing.

TACTIC will reformulate CorkSol's existing Thermocork insulation system with the addition of candidate nano additives to enhance its thermal performance to allow a 10mm coating to have the same equivalence as 50mm of mineral wool and to be applied at a lower cost than alternatives. The new formulation will be tested at both laboratory and real-life scale, where it will be applied using CorkSol's existing aerosol spray method. The project will also examine the market for this new material and produce marketing plan to help generate interest in the core target market of hard to treat homes, especially those in the social housing sector.

The project partners are CorkSol, a successful UK company that has in place an existing product that is sourced sustainably and a network of approved, trained applicators and Teesside University, whose academics have the technical skills needed to work on the product reformulation and testing needed. The project outcome will be a next generation of Thermocork with enhanced thermal properties that can be used on the hard to treat, uninsulated homes that are large part of the UK housing stock.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NSPR LEARNING LIMITED	Bloom: a digital tool to super-charge adult learning	£366,750	£172,372

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In a world that's been transformed by coronavirus, there has never been a greater need for Adult Learning. Millions of people are using their time in lockdown to sharpen their skills and improve their qualifications, knowing that they face an uncertain and challenging job-market when the virus has passed and the economy begins to re-boot \[reference, year\]. But without the ability to interact with other learners, the experience of adult learning has been hollowed out: you can take online courses at home, but there's nobody to bounce ideas off and ask the deeper questions that really get you thinking. It's hard to know what your learning goals should be, or which skills will be relevant to your future.

Bloom is a new company working to transform online learning for the better, by putting learners back in the driving-seat and connecting them to other learners. The Bloom Learning Coach uses Artificial Intelligence and the latest insights from neuroscience to help you learn faster, become more productive, and collaborate more effectively with your colleagues in this post-coronavirus world.

The Bloom Learning Coach is content-agnostic. That means it will help you become a better learner, no matter what you're studying, what resources you're using, or what level you're working at. By keeping track of what other people are studying, the Coach is able to make recommendations about what your goals should be, and suggest pathways towards achieving those goals. This makes it a truly user-centered product, different to anything else that's on the market.

Another key feature of the Bloom Learning Coach is its collaborative learning tools. When you get stuck, you'll have an instant network of other learners to turn to, and many of them will have grappled with the exact same problem you're working on. You can get answers fast, and you can consolidate your own learning by answering the questions of other users. While you're learning, the Coach will be learning too. It gets to know your routines and fits into your life rather than getting in your way. It understands what you're trying to achieve and can give you the right resources to succeed, encouraging you when you feel like giving up and suggesting alternative strategies when you get stuck.

Coronavirus has changed the world: it's time to change the way we learn.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GREENER WORLD LTD	Research & Development of Sustainability Networking Platform for Businesses	£90,900	£72,720

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Greener is an online networking platform that enables businesses to find innovative and applicable sustainable solutions fit for their needs. By utilising our team of experts, Greener is building an AI-driven algorithm which is able to intricately understand user requirements and automatically connect them with appropriate partners.

Initially conceived to protect businesses in the looming climate crisis, Greener is being deployed to facilitate a green-recovery following the devastation of COVID-19 on the UK economy.

This platform works for both sustainability Providers (firms providing sustainable products/services) and Seekers (firms searching for sustainable products/services), as our AI-driven technology streamlines the searching process exponentially. Instead of trying to network and search for the right partners manually, Seekers are immediately given a list of suggested Providers, and Providers have their products automatically shown to a wide range of ideal customers.

This centralisation of Seekers and Providers offers a deep understanding of market trends, needs and future direction. This enables Greener users to not only find sustainable innovation within their sectors but also utilise cross-sector innovations for relevant solutions. Greener empowers its users to form meaningful, effective and long-term sustainable collaborations through a deeper understanding of their needs as well as market offerings.

By mediating and dramatically simplifying this transaction, Greener will help drive the growth of the zero-carbon economy across the country. The Greener platform also emphasises intuitive, human-centred UX (user experience), as many businesses consider sustainability to be complicated and tough to understand (86% of firms interviewed during market research agreed). We believe that sustainability is paramount in establishing resilient and innovative supply chains, and seek to democratise its accessibility.

The key benefits of this platform are:

1. Allowing Seekers to find sustainability solutions fit for their requirements and thus reducing their environmental impact through collaboration with Providers.
2. Providing a larger market to (often small) sustainability Providers and empowering them in volatile markets.
3. Reducing and streamlining market complexities and therefore helping Seekers and Providers to save money, time and resources while building resilient, sustainable ecosystems.
4. Enabling users to promote their Greener collaborations as a marketing tool to communicate their environmental efforts with their consumers to drive more sales. This is particularly impactful as it is projected that a "€966 billion opportunity exists for brands that make their sustainability credentials clear" (Unilever, 2017).

We have already deployed an alpha platform to gain users, test our hypotheses, and gather feedback for future functionality. This platform uses off-the-shelf software. Our next step is to develop a full software platform ourselves which allows us to implement more of the advanced functionality which our users desire.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

The Greener platform will begin to implement additional features as our user base grows. Currently, the feature pipeline consists of marketing and cross-promotion capability, integrated sustainability analytics tools, ecosystem connection functionality, and user sustainability scoring (i.e. the Greener Score). Our vision is to offer a platform which enables users to understand, implement, and improve their sustainability performance in an intuitive and powerful way, while simultaneously growing the zero-carbon economy worldwide.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LONDON STYLE NETWORK LTD	StyleSwap Funding	£216,797	£173,438
Aston University		£75,000	£75,000

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

London Style Network (StyleSwap), partnering with Aston University, is a rapidly growing UK-based SME that was founded by Josephine Waddington, George Vogiatzis, and Rob Darwin. StyleSwap is addressing the £140M worth of textile waste that goes to landfills every year' (Wrap, 2018).

People buying 'new' fashion means shorter product life cycles, higher carbon emissions, and the harsh environmental impact of deadly toxins, washing, and excessive water consumption (Wrap, 2018).

StyleSwap's AI-driven buying and selling social community for pre-loved fashion is solving a global need to redistribute second-hand fashion. It captures users' sizes, shapes, and style details, and matches them to products, profiles, and others of a similar size or shape.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BETTERNATIONS LTD	Development of Nation.better self-guided B2B digital platform for sustainable immigration	£271,324	£170,934

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Nation.better is the UK's first technology platform, powered by the latest developments in Natural language processing (NLP) and machine learning (ML), that streamlines and optimises immigration processes, while significantly reducing immigration advisory cost, and providing clear guidance and compliance services to individuals and businesses.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PERSEPTIVE LIMITED	eHomeCare: Sustainable Tele-Home monitoring for healthy independent living of vulnerable groups.	£196,322	£157,058

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has increased social isolation amongst the elderly, particularly within ethnic minority and deprived communities, and providing good care in this situation is challenging. Individuals prefer living in their own homes and independence improves life satisfaction and happiness, which in turn reduces pressures and costs in health and social care. Healthy ageing is a UK government priority, with targets of 5 more years of independent living by 2035. Sustainability and carbon reduction in healthcare is a key part of the Government clean growth strategy, with the NHS responsible for 1/3 of public sector carbon emissions; 24% of this is related to buildings and 18% related to transport that can be significantly reduced by remote consultations.

Frailty involves multiple body-systems losing their built-in reserves, affecting 10% of people aged over 65yrs and 50% of over 85yr-olds, has increased prevalence in minority groups, and is the key condition leading to loss of independence. The British Geriatric Society recommends gait speed and timed get up-and-go test (TUG) as the most accurate objective tests for frailty, but patients are typically diagnosed by subjective clinician opinion. Reduced gait-speed and TUG performance correlates with all-cause mortality, hospital admission, falls, negative outcomes from surgery/ medical treatment and nursing-home residence. Exercise and physiotherapy interventions have strong evidence in reducing and reversing frailty and increasing disability-free life years.

eHomeCare uses novel indoor positioning and 3-dimensional pose analysis techniques to provide continuous assessment and trend analysis of gait speed, TUG time, truncal instability, daily distance walked, falls, and fall location. This information is used to accurately grade frailty and to guide an integrated remote physiotherapy application which gives real-time feedback on performance and personalised adjustment to the subsequent exercise programmes. The frailty data will also be shared with patients, families, clinicians, and carers allowing improved self-care and timely interventions to reduce and potentially reverse frailty, reduce falls frequency and enable better care planning.

Our vision is to lead smart telecare for seniors to promote healthy, independent living whilst helping to decarbonise the NHS by reducing hospital admissions and enabling remote outpatient care, with associated decrease in NHS carbon emissions from GP/hospital transport and clinical building space requirements.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AIRWAY MEDICAL LTD	Novel Portable Airway Suction Device with Anti-Viral Coating. Multiple Sector Applications.	£186,731	£149,385
University of Portsmouth		£79,665	£63,732

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Medical clinicians and carers often use suctioning devices to clear blockages in the respiratory airways of individuals. The scope of places where this happens varies from "high tech" Acute Hospital environments to temporary field-based Hospitals. It is also commonly used in the community for emergencies such as choking to chronic conditions such as Dementia, Stroke, Brain Injury and Cystic Fibrosis for example.

The reason behind the need to clear the airway is different for the above scenarios. For example; In a Covid-19 situation, the patient requires to have their airway cleared of sputum on a regular basis to prevent ingress into the lungs where it can harden and lead to the patient being admitted to ICU.

Paramedics may have to clear the airways of individuals who have had a seizure or have undergone a cardiac arrest.

In a care home environment, airway clearance may be used to support someone with a neurological illness such as Motor Neurone Disease, where the normal levels of saliva produced cannot be swallowed by the patient, or to remove food that has become lodged in the airway and is causing choking.

Each one of these environments deals with the need for suction differently, from having vacuum lines installed into the hospital and ambulance, to having expensive bulky electrically powered pumps, to the use of the Heimlich Manoeuvre and calling 999.

This project offers the solution of providing one simple low-cost portable suction device, that does not require electrical power. It looks like a sports bottle, is extremely rugged and waterproof. It is significantly cheaper (90%) than existing technologies and compact (90% smaller and lighter). It utilises far less resources to manufacture, is re-useable and can potentially be made from recycled materials. It will have a coating that provides 100% effectiveness against any Virus or Bacteria that contacts it, including Covid-19.

It works on the Venturi pump system, typically an hour glass constriction within a pipe with a T-joint. Flow of a gas or liquid across the T joint causes a negative pressure, i.e. a vacuum pump that can suck fluids away and into a storage container.

This project builds upon the initial work undertaken whereby an early prototype was shown to meet the required performance for Airway Suction as defined by ISO standard ISO10079-3-2014. Improvements will be made to the prototype, particularly with design for manufacturing and assembly in mind. Materials development will be undertaken. All of this will be done whilst working towards achieving medical device approval, CE marking, and protecting the Intellectual Property generated by this project.

Ultimately, a manufacturable device will be produced.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PROGRESS2IMPACT LTD	Enabling environmentally clean, sustainable and inclusive jobs and growth in UK. Development and testing of a 'virtual entrepreneurial ecosystem' to connect impact ventures with public and private sector donors to fund SDG aligned initiatives.	£162,897	£130,318
EVZEIN LIMITED		£37,931	£30,345
INSTA ASSOCIATES LTD		£14,897	£11,918
OXFORD UNIVERSITY INNOVATION LIMITED		£38,206	£30,565

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

- \* Startups and scaleups have an important weight in the UK economy and in advancing the Industrial Strategy. They are also key to sharing with government many of the social and environmental problems the country (will) face(s) and why impact startups are key to the economic recovery of the country.
- \* Startups are among undertakings most affected by COVID19, an entire generation may never scaleup. With limited liquidity available on the financial markets, there is a need for building an entrepreneurial ecosystem that can support impact startups creating environmentally clean, sustainable and inclusive growth and jobs.
- \* This project will develop a 'virtual entrepreneurial ecosystem' that redistributes financial resources (pre-seed) in the form of donations from public and private sector stakeholders to impact startups.
- \* The entrepreneurial ecosystems will connect impact startups from leading UK universities (Oxford, Cambridge, Coventry, Northampton, Birmingham, Warwick, Cranfield, Aston, Nottingham, Leicester, Loughborough, Keele) to public and private donors with an agenda aligned with the SDGs, including venture philanthropist, corporates, public agencies and impact investors. The nexus of the ecosystems will be built using crowdfunding technology, that will allow the flow of funds from donors to the impact ventures. Access to these stakeholders will be ensured by Oxford University Innovation and the European Venture Philanthropy Association.
- \* The experimental research carried throughout the project is based on principles of Agile, Lean Start-up, and Human Centred. And the project will last a total of 9 months.
- \* The project will produce 5 key deliverables: (1) 'virtual entrepreneurial ecosystem' prototype based on crowdfunding tech; (2) Proposal for SDG Partnerships (SDG 17) to ecosystem stakeholders involved in the project; (3) Blueprint for accelerating SDG impact to be used for broader dissemination and ecosystem building, (4) Impact measurement tool to assess the contribution of impact ventures to the SDGs, based on existing models, theories of change and UN Business Benchmarks and results of its empirical application during the project.(5) A use case of the platform consisting of an app addressing loneliness developed by an Oxford startup selected by OUI.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
J.C.B. SERVICE	Zero Emission Powertrain for Large Off-Highway (Project ZEPLO)	£350,013	£175,006
HYPERDRIVE INNOVATION LTD		£147,673	£118,138

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Project ZEPLO (Zero Emission Powertrain for Large Off-highway) is a collaborative industrial research project between JCB and Hyperdrive Innovation. The partners will bring together their expertise to explore a range of zero emission powertrain technologies which will be applied to heavy duty off-highway machinery as necessary part of the road to zero initiative.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STAGEPORT LTD	Tramway Revisited	£88,224	£70,579
Glasgow Life		£13,655	£10,924
INDIGO CULTURAL CONSULTING LIMITED		£38,500	£30,800
MCGINLAY BELL LTD		£15,544	£12,435
RVT PARAMETRIX LIMITED		£30,155	£24,124
THE ISO ORGANISATION LIMITED		£153,914	£123,131

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

\_Tramway Revisited will clearly demonstrate how digital innovation can enable the UK performing arts industry to recover from Covid 19\.\_

\_Because of Covid 19, arts venues and visiting producers face huge challenges, including:\_

\_1\. How to safely operate venues.\_

\_2: How to produce and stage performances.\_

\_3\. How to remain economically viable.\_

\_4\. How to engage with audiences.\_

\_Tramway Revisited will tackle the impact of Covid 19 through a collaboration between specialists in venue management, production management, visualisation, digital design, health and safety, and audience engagement.\_

\_The aim of Tramway Revisited is to provide a road map to recovery for the arts sector, by developing a new digital toolkit that venues and producers can use to quickly share vital information with audiences.\_

\_To achieve this, the project team will work with Glasgow's internationally renowned arts space Tramway, to engage with a diverse range of producers and artists and create accessible content that rebuilds trust with audiences and helps the sector to recover and grow.\_

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ESTR LIMITED	Creating the world leader in sustainable leather production	£214,960	£171,968

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*Description/Company Overview:\*\***

Qualus is the cleantech leader in leather production, an industry with a global annual turnover of £52 billion (US \$65 billion). Qualus' patented system enables tanners (leather manufacturers) to boost margins and lower their environmental footprint by significantly reducing the energy, water and chemicals required for production. The company has validated its technology with 20 tanneries in Europe and Latin America, has signed two 10-year contracts, and is revenue generating as of Q4 2019\.

### **\*\*The Problem:\*\***

Leather production is water, chemical and energy intensive, which in turn creates large volumes of effluent for treatment. An estimated 400 to 500 billion litres of water are required globally for leather production each year and tanners face market and regulatory pressure to reduce pollution. Tanneries MUST adapt or be replaced by their customers. Existing sustainable solutions are noncompetitive because they increase production costs and adversely affect the quality of the leather.

### **\*\*The Solution\*\*:**

Qualus' patent protected system enables tanners to lower their environmental footprint (15% to 20% less energy, 30% to 40% less water, 10% to 15% less chemicals, 30% less effluent in key production stages) while also reducing costs and improving the quality of the leather. Qualus' Sferes (small polymer spheroids) replace a significant percentage of water in the leather production process and are more effective in delivering chemicals to the animal hides, resulting in effluent with less chemical component and reduced load on the treatment plant. In so doing, Qualus boosts tanners' margins by 40% to 90%.

### **\*\*COVID 19 Effect\*\*:**

The COVID-19 Pandemic has had a major effect on the leather tanning industry and ESTR Limited. The main markets for leather are footwear, fashion, automotive and aerospace. All these industries are seeing a drop in demand by over 50% and massive downward pressure on margins which were in the 5% to 10% range before the pandemic. This is combined with global pressure to reduce the environmental impact of leather. The ESTR patented technology is one of the few technologies which can have a transformative effect on leather production. The challenge is reducing the cost of the equipment used to handle and clean the Sferes. Whilst making it easy to install remotely. This is driven by the fact the main customers are in Brazil, Mexico, Italy and Asia, all of which have been heavily affected by COVID-19\.

### **\*\*The Project\*\*:**

The ESTR project is to develop and field test a new version of the Sfera cleaning and handling system. The aim is to apply new concepts and innovations to the existing patented system. The target is to reduce the unit cost by 75%, design the system for volume production and simplify installation. It will involve detail design, build, testing and field testing to validate the technology.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TERAVIEW LIMITED	Demonstrator measurement system for 5G/6G materials characterisation	£278,618	£172,743

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has dramatically accelerated the need for improved internet connectivity and broadband capabilities, highlighting the need for higher bandwidth. There are an estimated 1.5 billion children who need online schooling (with 30,000 schools in the UK alone closed), and businesses world-wide have moved their operations online. In addition, reports emphasize that the transition to digital learning and business will be especially challenging within lower-income and disadvantages neighbourhoods where broadband adoption rates more often rely [on wireless][0] connections. High speed, wireless technology will therefore be increasingly be an important to both enhance connectivity to combat the economic effects of the virus as well as ensuring equal access to high quality internet for a more inclusive society. To address this challenge, emerging 5G and 6G wireless platforms will use progressively higher frequencies in the 100 Gigahertz (GHz)-1Terahertz (THz) range to achieve 1 Terabit (10<sup>12</sup> bit) per second data rates required for broadband. A recent Photonics report stated "\*\*\*It is not surprising that the THz band has become the promised land for the envisioned next generation of wireless communication---6G\*\*\*".

Development of devices (transceivers and circuits) at these 6G frequencies requires test & measurement equipment operating at these frequencies. Existing equipment based on vector network analysers provides continuous frequency coverage up to only ~ 30GHz, and with limited (banded) coverage available thereafter. Such systems are also prone to errors, e.g. in measuring the phase of data stitched between different frequency bands, as well as the errors arising when probing small samples.

TeraView is the pioneer in the commercialization and development of Terahertz systems, and is in a unique position to develop and deploy a system optimised for test and measurement of materials for use in Terabit communications

The project has direct benefits to the UK economy, ensuring that TeraView continues as the world-leader in Terahertz technology. It also enables the UK to play a role in emerging global discussion on the allocations of the new frequency band for 6G.

[0]: <https://www.pewresearch.org/fact-tank/2019/08/20/smartphones-help-blacks-hispanics-bridge-some-but-not-all-digital-gaps-with-whites/>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MY MASK FIT LIMITED	Developing a prototype, reusable custom-fit mask	£213,328	£170,662
Authentise		£35,042	£28,034
NEWICON LTD		£96,983	£77,586
RS COMPONENTS LIMITED		£71,744	£57,395
YOTI LTD		£0	£0

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The global emergence of COVID-19 has underscored the need for a reliable supply of respiratory facial protection which, if used correctly, it can provide adequate protection from the infection for all users, from healthcare workers to medically vulnerable individuals. Currently, the vast majority of respiratory facial protection includes masks that are disposable and standard-fit, not tailored to an individual's face. We have identified the critical need for supply of reusable masks that are custom-fitted. This need arises primarily from around 150,000 NHS workers who are struggling to have their masks adequately fitted and therefore unable to safely protect themselves in the clinical environment. Additionally, the environmental impact of disposable masks is enormous, with >400,000,000 masks being distributed by the NHS in 4.5 months. This project aims to combat both the fit issue and the environmental impact of disposable masks by creating a prototype of a reusable mask which is custom-fitted to an individual and meets the necessary regulatory and safety standards. Our innovative project aims to develop a facial scanning app that users can access from their own mobile device. The relevant data will be then transmitted through our platform resulting in the production of a reusable custom-fitted mask.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ENEE.IO LTD	Innovation in IoT Monitoring and Management Technology for Industrial Batteries	£216,755	£173,404
PHILADELPHIA SCIENTIFIC (U.K.) LIMITED		£51,679	£41,343

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

enee.io are a Manchester based start-up incorporated September 2019 to develop and commercialise our highly innovative IoT based asset monitoring and management technology. The enee.io AMT system enables automated and remote monitoring of industrial battery (IB) systems used in critical back up power and renewable power applications. Uninterruptible Power Supply Industrial Battery systems are relied on in Western economies, providing back up power to critical systems, including at hospitals, data centres, mobile phone masts and emergency lighting as well as for storing renewable power.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Combine AI	Automatic travel optimisation and scheduling for field-based services	£191,326	£153,061
University of Surrey		£74,359	£74,359

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

This project will deliver a prototype that will perform automatic travel optimisation and scheduling for field-based workers.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPEN SYSTEMS LAB LTD	Transforming local supply chains for zero carbon homes	£93,334	£74,667
Leeds Beckett University		£29,721	£29,721
REAL LIVING HOMES LTD		£89,603	£71,682
THREE CREATE LIMITED		£62,203	£49,762
University of Edinburgh		£63,305	£63,305

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The UK was already facing a housing challenge before COVID19: a significant shortage of affordable homes, a North/South divide, SMEs in decline and an outdated, carbon-intensive construction industry. The pandemic has brutally amplified those issues: escalating housing need, unemployment, and the collapse of many construction SMEs.

Yet we can see how all these challenges might share a common response: using the construction of circular, zero-carbon, affordable homes to reboot local economies, kickstarting a green recovery.

One opportunity being recognised by many local authorities and housing associations is that of bringing forward thousands of small sites (5--15 homes) already in public ownership to develop affordable tenure homes. It is a perfect strategy, since it helps alleviate social housing needs, reduces public costs, channels £ms into local economies, and in the end, taxpayers end up with an asset.

But there is a problem. Our legacy construction methods are simply not fit for the task: they are slow, wasteful, skill-intensive, carbon-intensive and require each scheme to be mostly designed from scratch. The old construction industry simply doesn't have the capacity to deliver such programmes. Recent innovation and investment in manufactured homes has focused on volumetric solutions produced by large, centralised factories, which exclude the 'long tail' market of small developments being delivered by SMEs.

The WikiHouse system exemplifies a parallel approach, which could be termed 'Design for Distributed Manufacture and Assembly'. It is a circular, zero-carbon manufactured building system, but unlike other modular approaches which require a large factory (with setup costs of typically £15m--£50m) it can be manufactured by a distributed network of small, local microfactories using digital fabrication tools, which can be set up for as little as £50k. Indeed, many already exist. The modular building components can then be rapidly assembled on-site to millimetre precision, even by small teams with no traditional construction skills.

The WikiHouse technology has been developed by Open Systems Lab and partners over several years, and has been used in pilot projects across the UK, Europe and beyond. There is now a growing number of Local Authorities, Housing Associations, community organisations and developers (some of whom are partners and steering members in this project proposal) seeking to use it as part of 'Local Homes' small sites programmes.

However, there is still an R&D gap to develop, optimise, test and document the system and replicable house types in such a way as to make it ready to roll out at scale. At present, this R&D burden is falling across lead clients. Our proposed project would allow OSL to work with world leading timber structural engineering researchers at University of Edinburgh and energy performance experts at Leeds Beckett University to accelerate R&D by months, or even years.

The result would lead to the creation of homes and local construction jobs in the Midlands and North, and to set the UK on a path to lead the world in digital, green construction for the SME construction sector.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SMART SEPARATIONS LTD	SmartStickers: Revolutionary bio-degradable and recyclable self-adhesive stickers to instantly kill Covid-19 and other viruses within seconds.	£220,248	£173,996

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Smart Separations Ltd. (SSL) is a rapidly developing UK-based SME that was founded by Hugo Macedo, a chemical engineer with a PhD from Imperial College, London. COVID-19 has resulted in a global economic crisis, particularly with the lockdown that has been ongoing for several months. Measures are now being eased and office workers are gradually returning to work and sharing surfaces and objects with their colleagues. These surfaces could be contaminated, as they are accessible to everyone. Therefore, the easing of the lockdown measures has resulted in new outbreaks of the disease. SSL aims to apply its innovative antimicrobial coating, ViraTeq, to the surface of biodegradable and recyclable self-adhesive polymers (Smart Stickers). This will be deployed in public spaces, offices, transports, etc.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AQUASPIRA LIMITED	Smart pipes for sustainable infrastructure innovation	£217,774	£174,219
University of Birmingham		£51,334	£51,334

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Aquaspira Limited and the University of Birmingham are researching and developing a smart pipe for sustainable large-scale buried infrastructure projects. The research will cover the use of recycled materials for large-diameter composite storm/drain water pipes and the primary backfill used in their installation. It will also incorporate novel sensing for infrastructure monitoring.

The project will provide a platform to demonstrate the use of recycled materials in composite pipes providing alternative options for the construction sector as they seek to achieve government de-carbonisation targets. This research will accelerate Aquaspira's R&D that would not otherwise take place due to the COVID-19 crisis.

The project will significantly enhance the understanding of composite flexible pipes and structures in the UK and provide an exemplar for new, low-carbon technologies in the construction sector.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Greyfly	Project Infrastructure Kickstart During COVID-19 Using Artificial Intelligence to Improve Project Success and Sustainability	£227,938	£173,233
University of Southampton		£94,940	£75,952

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Research shows an estimated 80% of projects fail to wholly achieve their outcomes in terms of time delay, budget overspend, and never realising the full anticipated benefits. Many existing projects have been delayed or derailed due to COVID-19 and the UK government are initiating new mega projects to kickstart the post-lockdown economy and provide sustainability. Without effective Project Management (PM), the successful outcomes of these projects may face uncertain risks and complex challenges.

Greyfly is an AI driven, Project Management (PM) Consulting firm supported by experienced professionals. We are collaborating with the University of Southampton to research and develop an Artificial Intelligence (AI) based Intelligent Project Prediction (IPP) tool that will extend the capabilities of our existing PM Maturity Assessment tool.

The IPP tool uses predictive analytics and machine learning across a portfolio of projects to highlight projects at risk and forecast the confidence and likelihood of project success.

The core components of the IPP tool are as follows:

\\*Data Model: defines what the system should contain and identifies the relationships between project data. This will enable us to map client data and build the system more effectively.

\\*Descriptive Analytics: Statistical techniques will be used to search and summarise historical data in order to identify patterns or meaning.

\\*Predictive Analytics: More advanced analytics will be applied once we have a good understanding of the dataset. After several iterations, an optimised solution can be achieved that can be used to inform future project outcomes.

\\*Machine Learning: Machine learning algorithms will be applied, to enable the system to learn from the data rather than being programmed with the results of previous analysis. A more accurate, multi-dimensional view of the results can then be achieved.

\\*Dashboard: Integrated view of results which can be tailored to client's needs.

\\*Cloud Based Architecture: Provides us with the scalability and adaptability required, as data volumes increase and functionality is enhanced.

The aims of the project are to:

\\*Leverage technology and advanced analytics to gain insight from historical project data.

\\*Improve project risk identification, to reduce the risk of failure.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

\\*Aid better decision-making through continuously updated information

\\*Enable swifter response in the event of further disruption due to COVID-19 or a potential global recession

\\*Demonstrate how we can unlock potential cost savings, as a result of increased project success.

As part of this research, two large public corporations are partnering with us in sharing their project data. With the accumulation of project data from various clients, we will perform benchmarking to identify patterns in industries, types of project, size and complexity.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FIELDWORK ROBOTICS LIMITED	Development of Simulation Tool for Raspberry Robot	£174,979	£0

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Fieldwork Robotics intend to build a simulator that will allow us to address several challenges caused by Covid 19, such as social distance, increase on the price of some key components, and the fact that only one to two people can have access to the robot to run optimisation trial at any time.

A simulator will allow us to trial many of the potential improvements in a software, reducing the bottlenecks caused by Covid 19 whilst accelerating the go to market, reduce the impact of scarcity of harvesters and address a key point on food security.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
UNCAPPED LTD	Novel free tools to support online business resilience, growth, and funding access following Covid-19	£217,439	£173,951

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Application presented by a new type of investor that specialises in lending/investing in online business against the revenue of the investee company. The applicants are specialists at lending money to online businesses that then take an "optimal" approach to increase their revenues and hence the payback of the loan/investment. Such optimisation might be how the company resources and strategy are best used to drive increased sales.

Uncapped has found that many early stage online businesses lack the necessary expertise and experience to know how best to use scarce resources in marketing to drive business growth. During the course of delivering past investments, the business has developed a set of models, knowhow and performance indicators that enables them to identify best practice in a given online business.

At present Uncapped have developed a client portal they connect to applications they already use to run the business. For example, payment processors (e.g. Stripe, PayPal), marketing accounts (e.g. Google, Facebook), accounting software (e.g. Xero, QuickBooks), and bank accounts. This tool enables the business to get real time analysis of their financials (revenue, cashflow), marketing efficiency analysis (return on ad spend) and understanding of customer behaviour (repeat customers, retention/churn, cohort analysis).

Uncapped would now like to move this client portal to the next generation of performance. The current portal only presents a picture of the business today, the aim for Uncapped now is to deliver a tool that can provide true insight to the owner and define optimal strategy for the management of sales revenue, digital marketing and growth opportunities.

The aim of this project is to provide online business (eCommerce, Direct to Consumer, SaaS, marketplaces etc...) with a truly intelligent tool that enables online business to make truly informed decisions. The need and value of this tool has never been more important to the UK as it emerges from the Covid-19 pandemic and the lone lasting implication it is expected to have on the UK economy.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INNERSPEC TECHNOLOGIES UK LTD	5G Enabled Digital-Twin for Asset Integrity Management	£177,406	£141,925
Brunel University London		£140,067	£140,067
EASTPOINT SOFTWARE LTD		£149,560	£119,648

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

World Corrosion Organization estimates the annual cost of corrosion to be €1.3-1.4 trillion (3.1-3.5% of world GDP). According to Vanson-Bourne-2017 study, 82% of companies worldwide have experienced at least one unplanned downtime outage in a span of 3years. All sectors require reduced non-productive time and improved workflow efficiency.

Covid-19 has exacerbated this and according to a Rystad Energy impact analysis severe spending cuts and Covid-19 will see O&M spend in UK fall to \$2.9 billion, the lowest level since 1990. This leads to an urgent need for technologies that enable lifetime extension , remote working and sustained performance.

We aim to develop 5G digital-twin hardware and software providing continuous feedback on generalized corrosion extant in pipes based through 5G links with miniaturised sensors pulsed with AC current that, when placed on the corrosion susceptible surface, capture any Magnetic Flux Leakage and links with asset integrity assessment software..

It will enable the integration of 1\ Asset integrity standards with 2\ NDT thickness mapping, all together into 3\ Digitally interactive platform with prediction modelling and smart display in real-time.

A [report from PSB Research][0], which surveyed over 3,500 people including business decision leaders, analysts and technologists, found that 91% expect new 5G based products and services , yet to be invented. 5G digitisation will open viable opportunities for remote digital-twins of high sustainability, and will boost all sectors with unexpected demand increase.

[0]: <https://www.qualcomm.com/documents/psb-public-survey-report>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DIOMETER LIMITED	Flexifarm - Improving the Resilience of the Food System	£130,905	£104,724

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

FlexiFarm is a project aiming to increase the resilience of the important first link in the global food chain, primary growers. The COVID-19 pandemic has highlighted the need through empty shelves, shortages of food items, logistical issues, and staff shortages. Future largescale events, including leaving the EU, are already looming (plans for lorry parks at major UK ports have recently been announced), whilst Climate Change, zero-carbon farming and sustainable farming are forcing additional change. Additionally, UK farmers will need to adapt as the Basic Payments scheme is phased out and the Environmental Land Management scheme (ELMs) emerges. Farming is facing a perfect storm.

Today there are many suppliers of hardware, software applications, and data to farms, many of whom have excellent solutions. However, their solutions tend to either operate independently or at best interact on a one-to-one basis. Many suppliers have significant vested interests in maintaining the status quo, whilst the effect is costs increase and margins are squeezed -- all making farmers less able to adapt and therefore reducing the resilience of the food chain. To address these challenges, farms need modern digital infrastructure to operate efficiently and flexibly on an end-2-end basis, a whole farm management solution.

This project aims to address this through the development and trial of a new virtual farming platform, an integrated digital platform bringing together the best in the industry at the data level. We will link different hardware, software and data sources, focusing on end-2-end operational workflows. Working with one of the largest farming operations in East Anglia we will trial the platform to demonstrate the benefits, feeding findings back into its development. Initial focus will be on agrichemical operational management, carbon use, integrated job management, and monitoring sustainability and biodiversity.

Existing solutions providers in the market will benefit by being able to deliver additional value to existing clients, making sales to new ones, and focusing on their core value add. Farmers benefit with cost savings and a flexible strategic technology platform. The industry and the economy benefit by increasing the resilience of the food system in the context of Climate Change, the need for more sustainable farming, and increasing biodiversity.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ZELP LTD	Optimisation of data gathering capability of ZELP technology	£219,283	£173,234

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*Our Company\*\***

ZELP has patented a wearable device for cattle that neutralizes livestock's emissions, which are responsible for ~15% of the total greenhouse gas (GHG) emissions that cause global warming. This innovative way of tackling livestock emissions is the most efficient way for the entire beef & dairy industries to make a dramatic, immediate difference to the climate crisis. The deployment of our device on a global scale has the potential to reduce GHG emissions equivalent to eliminating emissions from all forms of transportation combined\*\*.\*\*

The unique and innovative device captures cattle's exhaled methane and uses special catalytic technology to turn the gas into a combination of carbon dioxide and water, which reduces the animal's emissions' global warming potential to less than 1.5% of its original value.

The subject of this project is to develop and test the sensors and data gathering functionality of the device. We intend to analyze and process this data using proprietary software to offer a valuable herd monitoring tool to boost both animal welfare and farm productivity. The tool offers dashboards that enable producers to identify inconsistent behavior in individual animals, flag early symptoms of disease, improve yields, reduce labor costs, improve animal stress management, and optimize feed. Big data on animal behavior and methane inventories gathered on large populations of animals across farmers is an asset of interest to research organizations, pharmaceutical companies, governments, policymakers and other public stakeholders.

There is currently no comparable technology in the market which reduces emissions while also capturing data, making ZELP the only ongoing technological development to tackle this problem at the source. ZELP's ground-breaking technology enables beef and dairy consumers and value chains to drastically reduce their carbon footprint without requiring massive populations to change their habits while improving the productivity of farmers and providing valuable largescale emissions data.

The ZELP technology is at the core of the company's strategy to contribute to the sustainability of the beef and dairy industries through innovation. Our platform is the most efficient way for the entire beef & dairy industry to make an immediate difference to the climate crisis.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PETIT PLI LIMITED	Petit Pli - Anti-Viral Masks that Grow	£105,081	£84,065

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Petit Pli is an award-winning human-centred wearable technology company. Petit Pli embeds its patent-pending technology textiles to create bi-directional growing apparel - sustainable sizeless garments. Petit Pli's circular approach to garment design and technology significantly reduces waste & emissions generated at point of production, transportation and use.

Further, Petit Pli's innovation and designs act on a psychological level reframing clothing and plastic value, along with decelerating plastic obsolescence by extending the use-life of garments to reduce the volume of discarded garments entering the wider environment. Petit Pli achieves this by embedding a patent-pending structure in machine washable, rainproof, windproof outerwear childrenswear ensemble garments and adult face masks.

With the closure of physical stores, reduction in global CMT and mill manufacturing capacities, keeping materials in use present and innovating with in the reusable face mask market present as one the greatest points to reduce waste caused by disposable facemask consumption & production alongside protection from Covid-19 infection and prevention of COVID-19 transmission.

In this project Petit Pli seeks to carry out experimental research to develop new IP by exploiting research gained from Project 30601, leveraging Petit Pli's existing IP and Beta(MSK) consumer insights to improve the design, antiviral functionality and circularity of its 'one size fits all' growing mask.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MYED LIMITED	Second Phase development of MyEd Open School platform to help all UK schools to connect with their pupils to deliver teacher-led, structured and interactive home learning: A development in partnership with the Open Data Institute.	£131,251	£105,001
OPEN DATA INSTITUTE		£40,500	£32,400
SILVER TOUCH TECHNOLOGIES (UK) LIMITED		£59,735	£47,788

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

MyEd secured a £49,088 IUK grant from the **Business-led innovation in response to global disruption (de minimis) competition** for a six-month project for the development of the MyEd Open School prototype (Project No. 54156). The project is making excellent progress and a functioning, small scale tested prototype will be delivered by the end of November 2020, ready for second phase development over nine months for a fully tested and a robust service for a national launch by the beginning of July 2021.

The objectives of this second phase development project are to:

- (1) Conduct further research and development necessary to refine the design of the finished Open School platform that meets the needs of teachers, pupils and parents for the delivery of formal education during periods of national crisis and that will become an essential resource for teachers' daily practices.
- (2) Design, develop and test the fully functional service amongst primary and secondary school teachers, pupils and parents.
- (3) Further refine and retest the service that is ready for a national launch by July 2021.

The Open School is a digital technology solution specifically designed to empower every teacher to run virtual classes for their pupils that provides continuity of formal education at no cost to parents. Teachers will be able to plan, prepare and deliver short pre-recorded and/or live scheduled classes to their pupils (in small or large groups) that parents pre-register their children to participate. Content created by teachers is stored on the Open School platform for future use that parents can access at anytime and anywhere.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NOVALIA LIMITED	Calliope	£165,444	£132,355

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Novalia is an award-winning team who combine print with low-cost electronics. We use traditional print processes, widely employed across the print industry, combined with silicon-based electronics to create interactive experiences; connecting the physical world with the digital. The global market for Novalia's technology is large, growing and is sustainable. We have spent the last ten years developing interactive, printed capacitive touch interfaces for experiential advertising, marketing and game/toy applications.

In these unusual times it has proved mildly inconvenient to Novalia that the concept of touch is currently perhaps not the preferred interface for the public. The current Covid-19 pandemic has had instant and devastating impact on festivals, live music, entertainment, cinema and retail environments, amongst many other sectors.

The Calliope project aims to enable Novalia to amend and remodel our patented capacitive touch software and printed interface construction to operate reliably through the soles of users' shoes/footwear, allowing input through interactive floor panels or through gloves; obviating the requirement for direct user integumentary contact. We firmly believe that the arising technology has a significant place in the retail & fast-food industries that will emerge in the wake of the Covid-19 pandemic as well as supporting our work in the experiential advertising, marketing and toy industries.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BOTANICO DESIGN LTD	Spiru - Grow Spirulina At Home	£175,915	£140,732

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Spiru focuses on the development, protection and launch of a novel consumer biotechnology system, capable of growing daily servings of fresh spirulina, a blue-green algae nutraceutical that is recognised as one of the world's most nutrient-dense foods, containing high concentrations of antioxidants, beta-Carotene, iron, protein, and an array of vitamins and minerals.

A second, more severe COVID-19 outbreak is expected to claim as many as 120,000 lives in the UK by next year. The public health sector would consequently be under immense pressure and, therefore, the active management of health and our subsequent immune function could play a major role in addressing this challenge. While it is estimated that a COVID-19 vaccine could be ready by mid-2021, there are ongoing concerns with the safety of such a rushed development process, as well as the mutability of the virus and subsequent efficacy of the vaccine. The global nutraceutical market is reported to have seen a demand increase of 20% since the pandemic began, and in addition to this demand shift, COVID-19 has weakened the UK's food supply chains that heavily rely on importing nutritional foods. This not only highlights an opportunity for a UK-derived nutraceutical product, but more evidently signifies the \_need\_ for such a product.

Spirulina has been shown to have anti-viral, anti-inflammatory properties which are thought to boost immune function. Daily spirulina consumption could therefore serve as an effective barrier against future COVID-19 outbreaks, reducing lung tissue inflammation and lowering the risk of pneumonia, the most common cause of COVID-19-related deaths.

Spirulina is a popular nutraceutical, most commonly purchased as a powder and added to juices and smoothies, but the process of drying and shipping to the UK from China (where most of the supply originates) reduces its nutritional value by up to 50%. Spiru responds to the sharp increase in demand for nutraceuticals following COVID-19, offering a UK-based solution which retains 100% of available nutrients and does not depend on vulnerable food supply chains. It will be highly relevant in the expanding grow-at-home market, and will address the food industry's production, transport, cooking and waste disposal emissions throughout its lifetime.

Spiru will be designed within the circular economy, using bioplastic components and non-polluting processes where possible, and will have a net positive environmental impact. Launching a sustainable, user-friendly product, which can be manufactured at a fraction of the cost of lab-scale spirulina cultivation systems, will be a key challenge of this project, requiring intensive research, product development and testing.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRANSACTION LIMITED	Intelligent Freightboard	£218,110	£174,488

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project is to demonstrate that it is possible by the use of advanced artificial intelligence (AI) to restore the health of the 44,000 strong SME haulage industry (there are predictions 50% of the businesses may not survive, following COVID-19) and go on to improve the viability to the point where hauliers are able to achieve sufficient margin to fund the replacement of 50% of existing vehicles (average age 7.7 years) with more efficient Euro-6 engines which in turn will reduce the greenhouse gas emissions. This will be funded by cutting the huge levels of waste/inefficiency evidenced in the sector (30% of vehicles on the road are usually empty)

The Logistics Emissions Reduction Scheme (LERS) set itself the target to reduce by 15% by 2025 total emissions, recently the Head of Policy at the Freight Transport Association warned the Transport Committee this will be missed without government subsidies.

Our contention is that a new approach is possible which will avoid State funding and that the intention of LERS can easily be achieved, if not by 2025, then certainly by 2030, at the latest. It is all about having a 'can-do' plan!

The haulage industry, and especially the SME element provides essential support to the SME manufacturing industry, hence a healthy SME haulage sector is needed to underpin any recovery plan for manufacturing whilst increase in replacement of vehicles will also have a knock-on effect on employment in that sector

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WILSON BENESCH LIMITED	Novel Motor and Drive control System for Archival Quality Vinyl Transcription system called the GMT system	£141,570	£113,256
CAAS AUDIO LIMITED		£104,405	£83,524
Sheffield Hallam University		£80,873	£80,873

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

WB was founded in 1989. In 1990 it released the novel Wilson Benesch turntable system which established the company and its export markets. The Wilson Benesch Turntable and ACT One Tonearm is still a highly regarded design. It became obsolete as a result of the Papst motor being discontinued.

The GMT or Greenwich Meantime System is a ground up development that incorporates a number of novel design solutions and very advanced technologies. Examples would include the highly successful R1 Rack, released 2014. This is in fact an element of the GMT System. R1 retails for £20,000. Another good example is the Graviton Tonearm system that incorporates the worlds first remote control, Piezo actuated VTA adjustment. The Titanium structure for this tonearm was developed in collaboration with the AMRC Sheffield in 2018 and has been productionised collaboratively with Renishaw PLC. The prototype of the Graviton was selected to be part of the Audio Design Museum in New York in 2019.

As Lead partner Wilson Benesch has created a consortium to push forward development of a novel new motor and motor control system to complete the GMT System

In December Covid19 forced Wilson Benesch to shelve all its R&D plans and refocus. As a result, it reshaped its entire working environment in order to safe guard its staff and maintain production through the ongoing crisis. With Government support it has expanded its operations by 3,000 sq ft to establish working cells that enable staff to operate independently. The early response to the threats of the pandemic allowed the staff within the company to operate in complete safety throughout the Lockdown.

The Directors of both Wilson Benesch and CAAS Audio recognise that that the New Market of 2021/2 will present even greater challenges to SME's in this niche market. More than ever before, new products will need to demonstrate both radical and ideally disruptive credentials. The scope for mediocrity in the increasingly competitive global market will be limited. Innovation is more critical now than ever before.

Thanks to the significant intervention by IUK Wilson Benesch has been able to bring together world class expertise to form a consortium. The consortium includes Sheffield Hallam University - Dr F. Al-Naemi, Dr J. Travis and Professor G. Cockerham. And a second innovative SME, CAAS Audio which is also based in South Yorkshire completes the consortium and will bring the world class expertise of Dr C. Broomfield and co director N. Broomfield.

The consortium will enable a focussed collaborative effort to meet the significant technical challenges involved in creating a novel motor and dedicated control system. One of the key outcomes of this 9 month project will be the realisation of a fully operational working system that will demonstrate unprecedented levels of performance when compared to all prior art. Only such a solution will be sufficient to meet the exacting demands of the Greenwich Meantime System a system that Wilson Benesch believes will be a world beating design that music lovers across the world will embrace.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BRAND CONSCIENCE LTD	Fashion retail - creating a clothing label showing apparel sustainability credentials - towards circular economy	£108,024	£86,419

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

CREATE AN INDEPENDENT SUSTAINABILITY SCORE AND LABEL TO HELP CONSUMERS MAKE INFORMED CHOICES WHEN BUYING CLOTHES

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CORRELATIV LTD	PREFY: Pharmaceutical Re-Engineering for Efficiency and Future Sustainability	£103,592	£82,874
BAKER PERKINS LIMITED		£6,724	£5,379

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Correlativ and Baker Perkins are facilitating the paradigm shift of current oral solid dosage manufacturing from batch process, to continuous. Quality-by-Design, endorsed by the FDA and implemented in the process, will result in waste, water and energy demand reductions. An intelligent process controller will automate the process and facilitate remote data access and controllability, which will cater to a more distributed workforce. The success of a continuous manufacturing line is forecasted to impart a tenfold revenue generation per annum, compared to batch. This and the inherent capital cost reduction will give us a competitive advantage, disrupting the market and propel the sector into a more environmentally sustainable future.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACTIVE REALITY LTD	Active Reality - Group VR for Active Leisure Venues	£230,241	£174,983

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Active Reality will provide group free roam VR experiences to the active leisure market

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DEVELOPING EXPERTS LIMITED	Developing an AI reporting dashboard that builds and tracks STEM's future talent pipeline to improve the proportion of women and BAME engineers in the energy sector.	£206,736	£165,389

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Developing Experts Ltd(DE) is a rapidly growing UK-based SME specialising in EdTech, founded by Sarah Mintey and Shane Morgan. DE have identified a need for a tool which will enhance current schemes -- significantly affected by the COVID-19 health crisis -- aimed at improving the proportion of women and BAME engineers in the energy sector. In order to engage with and promote opportunities which will encourage women and those from BAME backgrounds to apply for and accept engineering positions in the energy sector, DE aims to produce an AI reporting dashboard which builds (by 100,000 candidates per year) and tracks the industry's future talent pipeline.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DIFFUSION ALLOYS (UK) LIMITED	Diffusion coating by microwave heating	£143,343	£114,674

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Diffusion coatings are applied to metals to protect against wear or metal degradation at high temperatures and within corrosive environments. The efficacy of diffusion coatings is well established in the power generation, aerospace and process industries. Production of the coatings is however, highly energy intensive and as a result, expensive.

Diffusion Alloys has investigated and intends to further develop a processing method for diffusion coatings which will change the current state of the art from highly energy intensive to energy efficient. The impact of a significant reduction in processing costs will open up new high volume markets for diffusion coatings globally. The company will drive the systems development of the technology from its site on Teesside and export processed components and complete systems to the global market.

The aim of this project is to fast track R&D and shorten the market entry timescale by providing technical and commercial validation through a 9-month project that will first build a small scale energy efficient diffusion coating furnace and then, through extensive testing and analysis, determine the attributes, strengths and constraints of processing.

Post project, Diffusion Alloys will seek to commercialise the technology through further systems development and scaling up. The goal is to be first to market and exploit a low cost, sustainably produced diffusion coating on a global basis. Expressions of interest from customers have already been received.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LIGHTFI LIMITED	ReOpen UK: Safe, Healthy & Energy Efficient Buildings	£201,988	£161,590
KNIGHT FRANK LLP		£100,067	£80,054

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 presents an unprecedented opportunity to drive behavioural change amongst building owners and operators. The crisis has forced millions of offices, commercial and public buildings to be closed. Their ability to re-open depends upon innovative solutions that can enable safe conditions, restoring trust in the building's ability to remain safe. Simultaneously, we need building owners and operators to re-think the operation of their buildings in light of the climate crisis. People are even more aware now of the link between air quality, emission reductions, and the need to reduce the spread of airborne diseases.

This innovation brings these needs and opportunities together through the systemic integration and development of innovative technologies, including people density counting, dynamic building control and granular air quality measurement with a new health related business model. This is a powerful opportunity to better manage airborne diseases, drive energy reduction and resource efficiency at scale across Europe and worldwide.

Ongoing monitoring of people's movements in buildings in line with social distancing rules, fresh air delivery and monitoring in every space, is a major challenge for owners and operators as countries come out of lockdown and look to get their economies running again under the new social distancing norms.

The innovation will create new Internet of Things (IoT) hardware, platform and integrations. Together this will provide an easy-to-use, cost-effective system that allows building operators, facilities managers and organisations manage and control energy, occupancy, safety, health and wellbeing within their buildings. Internet of Things sensors and building control integration will warn users when a space is at risk of overcrowding in line with COVID-19 guidelines. The innovation delivers valuable real-time data, enabling "close to real-time" adjustments to be made to HVAC systems and for social distancing breach intervention measures to be executed. Thus, simultaneously managing the social distancing risk and reducing carbon emissions through more efficient HVAC control.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Zelemiq Ltd	Home healthcare Diabetes flash monitoring device using a novel sensor that is simple to use and fully non-invasive, combined with Lifestyle phone app to target the obesity which leads to Type 2 diabetes	£158,533	£126,826

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Obesity routinely leads to Type 2 Diabetes, a disease identified as giving a particular risk for contracting the worst forms of COVID-19, Diabetes is also associated with a number of chronic life limiting complications such as heart failure, sight loss, and amputation of limbs. Type 2 accounts for 90% of the 4.6M Diabetes cases in the UK. The condition can usually be well managed or even reversed when the sufferers make relatively small but significant changes to their lifestyle. Managing the condition requires making regular measurements of the sugar levels in the blood. Diabetes UK say that Type 2 sufferers are being poorly served with provision of the necessary test equipment needed to achieve good control of their condition. When equipment is made available, it is usually of an older less effective type, than the newer more expensive systems exclusively going to Type 1 sufferers. This cost savings measure is very short sighted, because Type 2 Diabetes responds well to timely intervention and prevents the sufferer from going on to develop the unpleasant, and costly to treat, chronic complications.

Zelemiq Ltd. has a new design of blood sugar monitor which has based feasibility study that promises to offer the same levels of control as the better newer systems currently reserved for Type 1 sufferers, but at a price which rivals the cost the provision currently made to Type 2 sufferers. The system has the advantage of being entirely non-invasive by avoiding the need to puncture the skin to take readings of blood sugar levels. All existing methods require the skin to be punctured.

Zelemiq's new sensor design will be augmented by a phone app which will act as the user interface for the system. This application will be used to encourage the lifestyle changes that will enable the sufferer to manage their condition. It will, for instance, be used to alert when blood sugar is high and encourage the wearer to avoid certain foods and take some exercise, they will be rewarded by being able to track how their condition improves in the short term and over time. The wearer will be able to use the device to learn how their blood sugar levels change across the day and use this to better manage when and what they eat.

The World Health Organisation say that by 2030 there will be 438M Diabetes sufferers globally if current trends continue. By making an affordable easy to use system available, that enables diabetics to properly monitor and so manage their Diabetes, Zelemiq hopes to see this trend reversed.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EVER RESOURCE LTD	An improved method for producing lead oxides for enhancing performance of lead acid batteries	£204,530	£163,624
University of Cambridge		£81,302	£81,302

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Lead Acid Batteries (LAB) are critical in automotive starting, lighting and ignition (SLI) applications, stand-by power applications, tele-communications, computer networking and will be further driven by energy storage of renewables such as wind and solar, and traction, motive applications (vans, forklifts, carts, e-bikes). LAB recycling rates are very high in Europe (95%) but this comes at a significant energy cost and a high pollution risk/cost. Avoiding the emission of SO<sub>x</sub>, NO<sub>x</sub> and particulates from smelting is expensive, and not always effective. Furthermore, as smelting plants are only economically viable at large scale (typically 50,000 tonnes/yr, £34 million capex) each facility serves a wide area. LABs, a hazardous waste, are therefore shipped huge distances for processing. More than 200,000 tonnes of waste LABs crossed EU borders in 2007.

Another problem with current recycling technology is that the smelted lead ingot must be further processed to produce the essential ingredient for new LABs: the active leady oxide paste (PbO with Pb metal). Re-oxidising the lead to PbO requires a secondary process whereby lead ingot is heated to 350°C. This additional process is costly to LAB manufacturers (£250/tonne) and energy consuming (350 MWh/10,000 LABs processed).

Our project aims to revolutionise LAB recycling to deliver an improved, next generation LAB. Our innovation is a novel, green method of synthesising ultra-pure, nanostructured phases of leady oxide (Pb<sub>x</sub>O<sub>y</sub> with Pb metal) from spent LABs. The method enables unprecedented control of the crystal structure to produce desired phases of Pb<sub>x</sub>O<sub>y</sub>, which allows us to fine tune the performance of new LABs (e.g. improved power and energy density for automotive batteries; improved cycle life for renewable energy storage; etc).

The project builds on a long-standing partnership with Cambridge University (UCAM). Previously, the partners developed a hydrometallurgical, green method of recovering lead and leady oxides from spent LABs, reducing the carbon footprint (vs incumbent recyclers) by 85% and waste by >90%, while saving up to 20% in production costs. This innovation builds on that knowledge and IP, by controlling the output material - nanostructured leady oxides -- which is the key to unprecedented optimisation of new LABs performance. With this innovation we will contribute in supporting the world's switch to electricity via energy storage that is affordable, safe, highly efficient and which does not rely heavily on critical raw materials.

The team is led by Dr Fox, CEO and Mr Freeman, MD of Aurelius Technology (AT); Prof. Kumar, Principal Investigator at UCAM, Department of Materials Science & Metallurgy; Dr Selvaraj, who is a senior researcher at both UCAM and AT having worked on the lead battery recycling projects since 2018 and Dr Knight, Technical Officer at both UCAM and AT guiding technology transfer with the AT Managers. The team, in collaboration with other members of AT and UCAM, have shown that the future of LABs can be environmentally friendly, can support the drive to a circular economy and a shift away from fossil fuels, and can promote low-carbon process.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OFFSHORE SURVIVAL SYSTEMS LIMITED	Safety Net: Unmanned offshore search and rescue	£217,765	£174,212
CHARTWELL MARINE LTD		£45,538	£36,430
OFFSHORE RENEWABLE ENERGY CATAPULT		£94,200	£94,200
ORSTED POWER (UK) LIMITED		£6,000	£0
RED ROCK POWER LIMITED		£5,800	£0
SCOTTISHPOWER RENEWABLES (UK) LIMITED		£3,583	£0

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### VISION

To develop Safety Net, a resident marine based autonomous search and rescue service that will enable three significant changes in the design and operation of offshore wind farms to improve safety and profitability.

Change 1: Provide 24/7 rapid emergency response for offshore wind farms that reduces casualty recovery time frames helping to save lives at sea. An unmanned solution eliminates the need for a secondary manned vessel to provide emergency response onsite, reducing the number of technicians required to work offshore which reduces the overall risk profile and the risk of COVID-19 transmission between personnel.

Change 2: Enable offshore wind farm layout optimisation to improve the profitability of offshore wind farms. A resident marine-based search and rescue service removes the constraint of helicopter search and rescue which requires sites to be built in grid patterns.

Change 3: Enable helicopter only operations for rapid repair/breakdown response. Current guidance requires a secondary means of rescue within 30 minutes of a helicopter in the event of an emergency. Safety Net would cover this requirement enabling helicopters to deploy without backup vessels.

### OBJECTIVES/ FOCUS

This project will bring the partners together required to develop a turn key search and rescue service. The partners will be integrating several state-of-the-art technologies with high TRL values and applying these in a novel manner.

Working with our technology partners the key objectives are:

- \* Create a machine learning / Artificial Intelligence (AI) solution to save lives. Employing input from both aerial and onboard multispectral sensors the solution will:- Autonomously navigate all deployed assets to the casualties, identified by location beacon or VHF DR.
- \* Identify the signature of one or more casualties in the water.
- \* autonomously manoeuvre assets, according to prevailing conditions, Collision Regulations and casualty location to a position where the casualty can be recovered
- \* Employ the novel Casualty Conveyor Rescue System to recover conscious or unconscious casualties from the water to a place of shelter where their needs can be remotely assessed.
- \* Employing a data solution, to communicate sensory and multispectral data from both aerial and surface assets to a Remote Operations Centre. The solution must provide primary low latency, high capacity bandwidth from a moving asset in multiple degrees of freedom
- \* Employing 5G and fiber optic networks to provide secondary resilient communication via mobile assets and the Launch and Recovery System (LARS) base stations.

By developing, testing and integrating these technologies we aim to offer the worlds first offshore autonomous marine based search and rescue service,

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

helping to save lives at sea and build the wind farms of the future.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SPHERICS TECHNOLOGY LTD	Spherics MVP Development	£213,455	£170,764

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has changed businesses in many ways. Lord Stern suggests that we must "build back a better world". We agree. Spherics Technology was created to assist SMEs in the UK to respond to the climate crisis. During this unprecedented period of change, we have spoken with businesses and established that most are taking their environmental impact seriously. Organisations are asking not "IF" action on sustainability is required, but "HOW" do we do it?

Our answer to this question is to build tools which allow businesses to automate the process of tracking their environmental impact and empower them to create positive change through gamification of decarbonisation. We're designing a new metric to enable SMEs to engage quickly with a reliable indication of carbon footprint, based on accurate data. Our ambition is for the 'Spherics Score' to become the de-facto standard for communicating environmental performance across the SME landscape.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ENVIRONMENTAL TREATMENT CONCEPTS LIMITED	Increasing Energy Efficiency and Decarbonising Swimming Pools Using Non-Chemical, Advanced Physical Water Treatment Technology	£192,857	£152,357

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

**\*\*The Market Need:\*\*** There are over 3100 commercial and private pools in the UK, ranging from small 10 metres pools as part of fitness centres to 50 metre "Olympic" competition pools. The operation of swimming pools can be very expensive as there is a constant need for heat and water treatment. This means that swimming pools have a disproportionately high carbon footprint per square metre in comparison to other business sectors. An average 20 metre pool can expect to spend £45,000 per annum on water heating and treatment along, with having a carbon footprint of 194 tonnes per annum associated with energy, water and chemical consumption.

The Covid-19 crisis has hit the leisure sector hard, with swimming pools being some of the last to be released from lock down. The crisis has potentially damaged the growth of the industry for some time as no one is sure what the speed of recovery will be like.

With the governments 2050 Net Zero targets in mind and the current need to reduce costs, there has never been a better time for the industry to invest in sustainable technology to help improve energy efficiency and reduce water and chemical consumption. Such investments would contribute to savings in OPEX whilst reducing the impact on climate change.

**\*\*The Solution:\*\*** Environmental Treatment Concepts (ETC) is a market leading UK company in the area of non-chemical water treatment solutions and will use the proposed project to output a new, non-chemical method for treating pool water (also known as physical water treatment) using frequency-modulated energy to change the properties of the water. The goal will be to help end users lower their carbon footprint and operational expenditure by installing technology to reduce chemical, water and energy consumption

**\*\*Addressing The Need:\*\*** The proposed new water treatment device will be developed with three main targets for success, these are:

1. Remove and prevent mineral fouling to enhance energy transfer and heating efficiency.
2. Significantly improve the efficacy of disinfection products allowing a reduction in levels of chlorination.
3. Enhance the effect of pool water coagulation, reducing the amount of water required to back wash filters and lower the end users water footprint.

This will be achieved by experimenting with frequencies and outputs to establish the most suited to each of the listed targets. When this is concluded, ETC will evaluate working prototypes on 3 nominated trial sites. The trials will be evaluated and accredited using energy monitoring tools provided by a leading UK engineering company who have considerable experience in benchmarking energy performance.

Once independently accredited a final design specification will be settled on and a suitable range of products will be added to ETC's product list and presented to the industry sector along with the 3 case studies.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE FIFTH 9 LIMITED	Business Opportunity Collaboration Platform Furloughed and Unemployed - Phase 2	£206,794	£165,435
DAPPFLOW LTD		£151,966	£121,573

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The Digital Business Skills Collaboration platform matches nationwide business opportunities/demand to groups of furloughed or unemployed professionals; forming virtual teams & businesses to combine complementary skills and resources; allowing people to return to work quickly.

The objective of the DBSC platform is to lower the barriers to entry in the labour market for both employees and employers, targeting an innovative "at-home" digital service for furloughed and unemployed users to collaborate and form new flexible virtual teams. This would allow them to respond to local & national business needs with agility and contribute to the economy quickly after COVID-19, helping them recover with training motivation, business support and delivery guidance to empower and accelerate their back-to-work journey.

Individuals who are furloughed or un(der)employed during the work restriction period will be asked to register their skills, services and assets on the DBSC platform. Users can add to their DSBC profile by sharing information from other digital platforms such as Facebook, LinkedIn, Glassdoor, etc. The platform will support intelligent matchmaking with other people's complementary skills to address specific business needs.

The project is Phase 2 of the programme and focus on increasing the ease and speed to help people apply and get paid for work securely as well as incentives them to work on sustainable projects through gamification & rewards models. It introduces Smart Contracts linked to Digital Wallets, making payment digital with safe & secure transfers to our financial partners. This novel functionality enables virtual teams to form new virtual businesses, ranking them in the delivery and giving them access through a simple gamification model to new virtual financing solutions from reverse-auction short-term lending through to business tokenisation as well as integration to crowdfunding solutions with the potential to be SEIS qualified. The solution will also provide enhanced algorithms to provide a capability for Virtual businesses on the platform to meet demand outside the UK in line with Department for International Trade (DIT) initiatives to help businesses grow into global markets.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PODIUM NETWORK LTD	Affinity - A solution for online toxicity and disinformation	£209,297	£167,438

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Abuse, misinformation, and toxicity are destroying online communities. The Covid19 pandemic has thrown this crisis into sharp relief. Disinformation on subjects from 5G to vaccination have threatened efforts to combat the virus, while Covid's wider effects on society have exacerbated long-standing problems - most notably racial inequality.

On current social media, solutions for content moderation are feeble, inconsistent, and slow - taking days to reach arbitrary, opaque decisions.

Social networks publish 3Bn pieces of user-generated content every day. Centralised platforms - like Facebook and Twitter - simply cannot scale to meet the size of this task. The only thing large enough is the userbase itself.

Podium Network Ltd. was founded in 2018 to fix this problem - saving social media from itself and allowing it to fulfil its promise as a positive force in the world. Our solution - "Affinity" - empowers users of open, online communities to moderate each others' content at any scale - from tens of users, to billions.

With Affinity:

- \* Decisions are representative, consistent, and reached in minutes, not days
- \* Rules can cover every angle necessary to properly protect users, and can be democratically amended by the userbase
- \* Sanctions are proportionate, transparent, and meaningful
- \* Influence has to be earned and is always dependent upon conduct
- \* Bad actors cannot corrupt the system to their own ends or game opaque algorithms for prominence

This project develops Affinity from prototype to complete software solution and integrates it into a bespoke social networking application, ready for launch.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GM FLOW MEASUREMENT SERVICES LTD	Development of a hydrogen and carbon dioxide flow meter	£208,855	£167,084

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The dramatic effect of Covid-19 has been a wakeup call to the world and how we treat our planet. Transport, energy, food production etc all contribute to our CO2 impact - oil and gas is seen as a major contributor. We need to change the focus of our business to play our part in the energy transition for the future. Our technology is very adaptable for the hydrogen industry and we can add products to our portfolio to serve this emerging and growing market.

The objective of this project is to enhance the performance of an existing flowmeter, which is widely respected in the oil and gas industry. The device is already highly innovative, being a self-adjusting gas flow meter, which automatically adjusts its operating flow range to match the flow rate of the gas being measured. Notwithstanding, the desired improvements will provide a device for even more reliable and accurate flow metering of hydrogen and carbon dioxide gases, in the emerging global hydrogen economy. We wish to undertake tribological and seal permeability testing, investigating the use of polymer and/or metallic seals and their mating surfaces. Flow loop calibration, erosion studies and computational fluid dynamic studies will be undertaken to compare the meters performance against that of natural gas.

Hydrogen is the smallest and most abundant element in the universe. Because of its small molecular size, it presents challenges in terms of physical leak paths, metallurgy and permeation into sealing compounds, changing their physical properties such as hardness, porosity and occupied volume. To verify that the self-adjusting flow meter remains gas-tight and safe over time, we will undertake assessment and testing into the current sealing system to ascertain what sealing system improvements will be required for operations with H2 and CO2, compared to natural gas. We will examine the direct effects of H2 and CO2 on meter seals, component coatings, substrate materials and how the seals and mating components behave in the presence of H2 and CO2.

By adapting the existing product, we will reduce costs, personnel intervention, installation footprint and increase safety, accuracy and longevity, all while allowing hydrogen generators to enjoy the same wide flow range which oil and gas users demand. Safety is crucial in each of these applications, where seals and sealing surfaces are critical to the pressure integrity and long-term gas tightness and longevity of the equipment. By offering reduced installation costs and increased longevity, we can help operators to reduce capital and operational costs adding a small but important part to economic viability of this emerging industry.

Our learnings will also help to offer more even more reliable equipment to our existing customers, so we can grow our company, increase our ability to employ higher numbers of people and support the local economy.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MOLENDOTECH LIMITED	Development of rapid testing technology to increase food security	£174,995	£139,996
University of Southampton		£74,910	£59,928

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

During the COVID-19 pandemic shortage of labour to harvest and process crops led to a decrease in food supply when demand was increased for fresh produce as consumers increased their intake of fresh fruits and vegetables. Speeding up food delivery to supermarkets thus becomes critical at times of crisis to avoid food shortages. Food safety testing of produce is mandatory but current bacterial culture-based testing is time-consuming (2-5 days) and all tested products must be stored while waiting for test results before being released to supermarkets. This delay not only slows supply of food to retailers and shortens shelf life, but storing produce requires warehouse space, additional packaging and cooling and thus additional energy, which add significantly to the growers costs and the carbon footprint.

Molendotech, an innovation company that specialises in assay development, has developed a fast test for pathogen identification in products and processing facilities that gives results within a time frame (~5 hours) that overcomes the need for extended storage of produce thus reducing costs, increasing shelf life and saving energy use. We have developed assays for common food pathogens including E.coli and Salmonella and it is designed to be used on site at farms by non-specialist staff. In this project, we will work with food growers to validate our novel assay technology on site at their farms. By providing test results quickly, there will be no need for prolonged storage of produce and batches of crops can be sent to supermarkets without delay. This project will allow us to further develop and improve our technology to produce a prototype kit that can be used widely by food growers.

In crops, bacteria often grow in protective layers or biofilms that can adhere to leaves. Food processing offers ideal conditions for biofilm formation and they may contain pathogens such as E. coli and Salmonella. If food comes into contact with these biofilms, contamination may occur and consumers may become ill by eating contaminated food. Biofilms can induce forms that are difficult to culture and detect by current methods. In this project we will work with biofilm experts at Southampton university to validate that such biofilms do not interfere with our assay and that our assay technology can detect bacterial biofilms as this is important for the food market.

At the end of this project we shall understand how our technology can test food produce quickly on site and allow growers to release food batches quickly to supermarkets. This will not only save time, money and energy use by the growers but alleviate a critical choke point in the food supply chain and thereby help build resilience into the UK food chain

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
H2GO POWER LTD	HyAI - Hydrogen AI	£246,999	£175,369
Imperial College London		£100,232	£100,232
THE EUROPEAN MARINE ENERGY CENTRE LIMITED		£4,968	£4,968

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

H2GO Power energy storage solutions are zero-emission end-to-end technologies with the principle of storing renewable energy in the form of Hydrogen. H2GO offers benefits over existing storage technologies (such as longer duration storage, longer lifetimes, safety with enhanced storage capacity at low-pressures). This project proposes 'making the hardware smart' by integrating an energy management system with predictive algorithms using AI that has the ability to predict future electricity generation based on weather forecasts, predict electricity prices and user demand. This communication platform will have the capability to translate the understanding from the environment such predicting weather-based future generation with repeating user demand patterns, whilst using the enabling character of hydrogen storage for long duration storage as an optimisation bridge to allow reliability, resilience and accuracy in responding to demand. Without a platform like this, the storage assets will be mechanical and operated on as back-up solution only rather than an integral part of operation. HyAI, with its hybrid nature, has the potential to increase power reliability and encourage further adoption of renewables and unleash greater flexibility to be available to grid operators.

This project proposes to develop an innovative technology using existing H2GO storage units, in collaboration with Imperial College London, and deploy it on a customer data (EMEC) from a testing site, Isle of Eday in Orkney, who are also part of the consortium. This project will show that it has the ability to enhance grid operational capacities, that do not exist as yet with hydrogen and can create a digital tool that grid operators look upon favourably with mass roll out to allow further penetration of zero carbon generating assets into the UK grid.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PASSIVSYSTEMS LIMITED	Insight	£174,692	£139,754

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*Our Vision\*\***

PassivSystems has developed a new way of remotely characterising the thermal performance of domestic properties that addresses key challenges that have arisen as a consequence of COVID-19 and provide useful tools to help mitigate climate change. Through this project, we are proposing to build on our advanced monitoring and modelling capabilities to deliver an innovative service targeted at private homeowners and social landlords. The objectives of our proposed service are to:

1. Reduce the need for in-home surveys and potential COVID-19 infection risks from assessors visiting multiple properties
2. Provide a unique digital thermal performance calculation to model the impact of installing low-carbon measures
3. Improve the targeting of energy-efficiency measures to reduce fuel poverty and support economic recovery
4. Deliver ongoing environmental quality monitoring in homes leading to better health outcomes, particularly for respiratory conditions associated with COVID-19

### **\*\*The Insight Service\*\***

The Insight Service will use wireless in-home sensors to provide energy modelling and environmental monitoring. The sensors we are proposing to use are extremely easy to install and would be posted to residents. They use an ultra-low-power, narrowband communication protocol to capture temperature, humidity and CO<sub>2</sub> readings from a building. Data from the sensors will be collected via our platform and combined with smart-meter data, external temperatures from weather stations and physical characteristics (from a recent EPC or from an online form completed by the resident).

The core innovation is the use of PassivSystems machine-learning to provide sophisticated modelling of a building's thermal characteristics. This modelling will help landlords and homeowners assess the in-situ energy performance characteristics of individual homes. Additional data from humidity and CO<sub>2</sub> sensors will provide insight on a property's environmental health enabling ventilation, damp and mould risks to be assessed and to highlight risks to health.

We will develop a new dashboard-interface to present our data. Landlords will be able to make logical groups (for example by age, heating, interventions), track aggregate performance metrics across a portfolio and deploy big-data analytics to identify real-time performance issues. We will also develop new reporting capabilities to support comparison analysis, trends and avoid false alerts that create unnecessary callouts, thereby further reducing the need for unnecessary social contact risks.

In the UK, domestic energy use is responsible for more than a quarter of carbon emissions. But assessing the most appropriate route to reduce these emissions to help mitigate climate change is a significant challenge. The ambition of this project is to demonstrate that easy to install, remote sensors can deliver quantifiable insights on both energy and environmental performance directly to landlords and homeowners. Our machine learning technology will also provide accurate performance monitoring and evaluation of low-carbon heating systems.

We believe that by using remote sensors that actively reduce the need for multiple potentially high-risk home energy survey visits, the Insight Service will not

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

only be able to help improve the environmental quality of homes through ongoing monitoring but will also help to unlock the investment needed to deliver large scale low carbon retrofit using quantifiable thermal performance modelling.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HIRSCH & MANN LIMITED	ICE BREAKER	£200,769	£160,615

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

**\*\*Project Vision\*\*** - The ICEBREAKER is a physical-digital badge equipped to provide high-quality networking experiences for the event industry by introducing safety, efficiency and playfulness. The smart badge offers a smooth experience for attendees allowing them to gain confidence in being around others through integrated social distancing measures, to navigate the space efficiently through visual cues which lead them to people with shared interests, and to have more meaningful in-person conversations that are digitally recorded for later use.

**\*\*Focus Areas\*\*** - The ICEBREAKERS combine various technologies to solve in-person and digital networking oversights in the event industry, by offering a multi-functional product that can be seamlessly integrated within any event context to enhance the networking experience of attendees.

**\*\*Key Objectives\*\*** - Through the ICEBREAKERS badges, Hirsch & Mann's (H&M) objectives are to introduce safety, for attendees' to network within reasonable proximity based on the latest COVID-19 related guidelines from the government. The badges also offer smart visual cues to identify attendees with shared interests across the event space, leading to more fruitful conversations during the limited time they have to connect with others. The badges are additionally designed to offer secure integration with already existing event App, digitally recording connections established during the event. These solutions may potentially lead to a reduced overall movement in the space, as the flow of attendees to network will become more guided and purposeful via the badge. Once the event is over, the collected data and event insights will offer organizers the possibility to use this engagement information for their own KPI's beyond the scope of this event.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WINNOW SOLUTIONS LIMITED	Machine learning to help the hospitality industry recover through optimised food production	£200,028	£160,022

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The global hospitality industry does not have a tool that can accurately help it predict how much food to produce, and when. This results in both economic and environmental challenges. Overproduction of food leads to vast costs; in the UK Hospitality and Food Service Sector, food waste was estimated at over £2.5bn in 2011, with 75% of it recorded as avoidable. The environmental impact is monumental; if global food waste were a country, it would be the third largest emitter of greenhouse gases after the USA & China. Overproduction also lowers food quality. Underproduction causes its own issues; hurting customer satisfaction and margins. Providing chefs with a tool which can give them actionable insights based on a wide range of data including weather patterns, historic waste, time of day and demographic of customers could help them optimise their production. This project aims to build on WSL's experience of building machine learning models and presenting actionable data to chefs in around 1500 kitchens to build a prototype production planning tool which can be presented to customers for feedback. This project's timing is imperative; the hospitality industry has been one of the hardest hit by COVID-19, and needs tools to help it have greater control over operations and margins.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OKULO LTD	Harnessing mobile devices to create a sustainable way of delivering eye care at scale, through COVID and beyond	£172,897	£138,318
Manchester Foundation Trust		£24,569	£24,569

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Okulo Ltd (trading as OKKO Health) develop smartphone software for home-monitoring of vision.

This project is to drive the development of a technological system and corresponding patient pathway to allow AI-driven home-monitoring of vision for patients who would otherwise have had to come for in-person hospital eye clinic appointments. This project will develop diagnostic biomarkers from app data and research ways to optimise their uptake in the NHS and beyond. This will increase both the environmental sustainability and the financial sustainability of the NHS.

This responds to the acute COVID challenge that we now need to triage/monitor vision away from hospital clinics. The mass cancellation of in-person appointments means that our patient population face sight loss if a deterioration in their condition is not picked up early enough in time for treatment.

In the project we will work closely with NHS units and with University of Bristol staff. The proposed project isn't just about developing connected and clever technology, but it's about co-designing with patients and their families, and doctors, nurses and hospital administration systems a brand new digital pathway of care that will revolutionise the experience of eye care for all of us when we need it.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADDITIVE INSTRUMENTS LIMITED	Closing The Loop - Towards defect free additive manufacture	£215,715	£172,572
Imperial College London		£89,903	£89,903

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The manufacturing industry is no stranger to revolutions, from the first industrial revolution in the late 18th century which saw the mechanisation of hand production, all the way to computerisation in the 20th century, manufacturing and production technology continues to evolve. The latest industrial revolution, Industry 4.0, which we find ourselves amidst, is driven by machines becoming "smart." Machines and systems are now augmented with sensors and artificial intelligence to make their own decisions. 3D printing or additive manufacturing (AM) is a key part in this revolution as it enables production of components not previously possible as well as more efficient designs, flexible production and less waste. As opposed to subtractive manufacturing which starts from a large block of material and removes material until it produces the desired shape, AM works by building (additively) an object layer-by-layer in a highly automated way. However, AM is still immature compared to many traditional manufacturing processes and requires further advancements before it can be considered "smart".

When producing parts in metals, defects can occur. These defects may consist of cracks, internal pores or impurities, and these defects can significantly impact the performance of a manufactured component. The consequence of these defects can be premature, or even worse, unexpected, failure of the component. Manufacturing processes for metals such as welding, forging and casting are far more mature than AM, having been studied extensively for centuries. Consequently, there is a far better understanding of why these defects occur and how to optimise these processes to minimise them. Currently, AM is on the same journey of knowledge acquisition; a journey we believe can be accelerated by embracing a "smart" approach.

This work will integrate innovative process monitoring equipment into AM machines to detect defects as they form during the build process, allowing us to fix them in-situ as well as enhancing our understanding of why they occur. This will help enable and accelerate the use of metal AM parts for structural end-use and high precision applications. This approach will give us confidence in the quality and safety of newly built AM components, reducing the need for slow and costly post-processing processes, and accelerate the adoption of AM as a manufacturing technology.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VALUECHAIN TECHNOLOGY LTD	Accelerating Cross-sector Collaborative Ecosystems and Sustainable Supply-chains (ACCESS)	£218,552	£174,842
FITFACTORY TECHNOLOGY LTD		£153,862	£123,090
RAIL FORUM		£28,706	£22,965
THE NORTH EAST AUTOMOTIVE ALLIANCE LIMITED		£32,364	£25,891
WEST OF ENGLAND AEROSPACE FORUM LIMITED		£60,080	£48,064

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

There is an immediate need for granular supply-chain intelligence and proactive risk mitigation through collaboration and focused intervention, to prevent good UK aerospace, automotive and other HVM SMEs from getting into unrecoverable financial difficulties.

However, in order to mitigate impact of Covid-19, UK aerospace and automotive manufacturing businesses can no longer work in silos and compete as individual organisations. Instead, they must connect and collaborate with customers and suppliers so that they can compete as integrated, cross-sector manufacturing ecosystems, which enables organisations to focus on core competences, benefit from economies-of-scale and share knowledge.

This project will address significant barriers that inhibit growth of cross-sector manufacturing ecosystems; such as supply chain transparency, data security, trust, engagement and lack of digitalised infrastructure to streamline the capture, curation and analysis of reliable supply-chain big data.

### **\*\*ACCESS Innovations:\*\***

- \* launch a cross-sector SME-focused supply-chain collaboration digital marketplace that will enable B2B tendering and collaboration
- \* establish a freemium smart manufacturing app-store that will drive SME engagement and incentivise users to maintain profile data, connect with other network users and drive collaboration
- \* generate cross-sector classification taxonomy that underpins B2B matchmaking AI to automatically recommend connections for work package tenders and innovation consortium

### **\*\*ACCESS Outcomes:\*\***

- \* unprecedented multi-tier visibility of UK aerospace and automotive supply-chain which will reduce sub-tier risks and increase on-shoring opportunities
- \* connect aerospace and automotive suppliers with cross-sector high growth opportunities such as rail, sustainable transport and renewable energy supply-chains
- \* enable aerospace and automotive manufacturing SMEs to identify new sustainable supply-chain opportunities, to catalyse business re-purposing, mitigate business downturn and loss of critical skills
- \* provide UK OEMs and Government bodies with unprecedented granular industry intelligence to focus policy and intervention support, ensuring UK taxpayer's money deployed most effectively to re-grow UK aerospace and automotive manufacturing whilst focusing on sustainability and green agenda.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PULSE SYSTEMS LTD	Meshed Network Cloud BMS	£161,556	£129,245
CASCODA LIMITED		£37,414	£29,931
DATA PERFORMANCE CONSULTANCY LIMITED		£104,179	£83,343

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

An innovative new device for building management solutions; built using internet protocol (IPV6) from end-to-end, ensuring security, interoperability and high extensibility. The device will use data models and standards defined by the open connectivity foundation (OCF), ensuring that vendor lock in via closed protocols will become a thing of the past.

Currently, Building Management Systems (BMS) are predominantly plant-room based hardware controls that necessitate manual interaction. This means that when scheduled or unscheduled maintenance is required, an engineer has to be physically present to fix the problem.

As during the pandemic, when a building is unused for a period of time - normal services operation leads to unnecessary levels of energy consumption. Combined with this primary inefficiency, any overall deterioration in building performance goes unnoticed. This leads to further negative impacts on both energy usage, environmental impact and the bottom line.

Pulse Systems have designed an innovative new product that makes these obstacles a thing of the past. With this technology, BMS are simply uploaded to the Cloud -- meaning that they can be operated remotely. This gives building managers the power to see everything going on in their building, giving them control over everything from hardware malfunctions to a forgotten light switch. Cloud BMS removes the need for many physical maintenance visits, which in the context of a post-pandemic society can be difficult, dangerous and financially detrimental.

The device will be built using internet protocol (IPV6) from end-to-end, with data models and standards defined by the Open Connectivity Foundation, ensuring the highest level of interoperability and security for our clients. In addition, the change from closed to open protocols translates to improved transparency and agency -- the customer can choose to share their data but this is completely at their discretion. Functions for this capability include being able to see exactly how and where energy is being wasted and share that with the users of the building or energy providers. This provides obvious financial benefits and promotes sustainability.

In the current climate, environmental consciousness is key. Pulse strives for carbon neutrality in its own business, and our product encourages and enables our clients to reach for this goal. With a product that allows the energy performance of a building to be accessed and altered from anywhere, clients are empowered to make the most responsible energy choices for them and for their community.

In short, all of this translates to a product that has low installation costs, low maintenance and update costs and that will integrate well with both current and future systems.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BICYCLE TX LIMITED	Advancing the development of a novel class of antibiotic	£215,395	£172,316

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Whilst the COVID-19 pandemic has caused the death of >500,000 people worldwide this year, antibiotic-resistant bacterial infections are killing 700,000 people every year. The worldwide effort to develop new antibiotics has suffered severe dislocation during the COVID pandemic. Worse still COVID has increased use of broad-spectrum antibiotics due to the threat of bacterial co-infections thus fuelling the AMR crisis, as well as creating a large reservoir of hospitalised patients, many ventilated, who are at genuine risk of contracting multi-drug resistant bacterial infections.

Whilst new antibiotics have been developed they are mostly incremental improvements on existing classes, sharing ultimately the same liability to resistance mechanisms. For Gram-negative bacterial infections, one of the most difficult to treat and prevalent in our hospitals, there has been no new class of antibiotic introduced since the 1970s. This is the problem we seek to address.

With support from the SBRI programme, we have used Bicycle's proprietary bicyclic peptide (\_Bicycle\_(r))technology, to develop strong leads against penicillin binding protein 3 (PBP3), part of the bacterial cell wall biosynthetic apparatus and a key target of the beta-lactam antibiotics. However, our agents, which are of a totally new chemical class, will not suffer the same resistance liabilities, namely:

- 1\ Inactivation by beta-lactamase enzymes -- our agents have no such liability
- 2\ Reduced uptake into bacteria due to loss of outer membrane porins and efflux -- our agents have a totally different mechanism of entering bacteria

We have already made substantial progress. We have developed a potent inhibitor of PBP3 in Enterobacteriaceae and, despite the pandemic, determined the crystal structure of the bound lead which shows exquisite interactions with the enzyme active site across a broad binding surface.. Our lead has promising antibacterial potency and species spectrum of activity even against the most difficult to treat bacteria.

To raise further funding, we need to show \_in vivo\_ efficacy which requires compound stabilisation to confer acceptable pharmacokinetics. Bicycle has a well-developed tool-box of previously successful approaches to apply to this goal. We propose a short, focussed project to secure this key progression step.

Much of the momentum lost due to COVID can be recovered if we can address this step quickly so we can be well-placed to apply for upcoming national and international funding opportunities. Bicycle's business is now COVID robust. Infrastructure and procedural modifications allow work to be carried out efficiently in our own laboratories. Furthermore, the CROs, to whom we propose to outsource key \_in vivo\_ experiments, have continued to operate through the pandemic.

The pandemic has demonstrated the potential global economic impact arising from the failure to prepare for public health issues. Earlier this month a consortium of 23 top pharmaceutical companies established the \$1bn AMR Action fund to support clinical development of new antibiotics. A pilot scheme has been recently established in the UK to provide much needed market incentives for new antibiotics. The field is poised for a 'COVID-induced' stimulus. This funding is needed to position Bicycle to be part of the much-needed response to AMR.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KAY-LAMBERT ASSOCIATES LIMITED	Toolkit for Travel-free Remote Team Development	£300,181	£174,105

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

It is hard to build really effective teams when you work remotely, but it's an essential part of a successful business. Effective teams have a common purpose, make better decisions, solve problems more quickly, manage conflict well, and use their diverse team strengths efficiently and effectively.

Just like sports teams, if you want to be in the topflight, you need great coaches/trainers. But team training, especially for remote teams and smaller companies, is expensive. With Covid-19, it's practically stopped. It doesn't have to be this way.

Covid has increased the use of videoconferencing platforms as people have become more comfortable and familiar with them, but they aren't designed to create elite teams or galvanise and stimulate team performance. They need other elements to be truly effective as a development tool. Our online toolkit expands upon these platforms giving teams a vehicle for:

\\*using interactive tools to work on team issues

\\*testing and developing their capabilities

\\*benchmarking against a High-Performing Teams model and following improvement plans

\\*playing multi-player games that highlight development areas

\\*completing team surveys producing instant results

\\*gathering and moving through immersive 3D locations with avatars

\\*keeping persistent and private records of team progress

Historically, this coaching/training has been delivered in face-to-face instructor-led sessions, requiring significant travel with a high cost for the planet and company purse. With business teams increasingly dispersed across cities and countries, this travel leaves a huge carbon footprint.

Covid-19 has further separated team members from colleagues with the significant risk that teams will become more fragmented, less effective and that team members start to feel less connected. The inevitable result is a hit on personal wellbeing and team cohesion when we are trying to rebuild our economies.

Reports highlight that remote working will increase. A recent Gallup poll in the US [<https://news.gallup.com/poll/311375/reviewing-remote-work-covid.aspx>][0] found 50% of people want to do all their work remotely. Twitter are abandoning offices altogether. This doesn't mean people want to work in isolation, nor that it's possible to do so effectively. We urgently need to help teams come through this crisis and prepare them for operating in a changed working landscape.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

\_Muster\_ connects and enhances dispersed teams, equipping them with tools to thrive. It's a sustainable alternative to face-to-face team-coaching.

\\*Dispersed team members can log in from anywhere and muster in a private virtual space

\\*They can access team activities, business-simulations, tools, tips, real-time analytics

\\*The toolkit incorporates gamification, 3D interactive/immersive visuals and environments, and multi-player networked functionality.

It's the first comprehensive online toolkit focused entirely on self-managed team performance, providing a virtual facilitator/coach for teams.

With our colleagues in the CreateTech industries we'll harness the power of immersive technologies and rich narrative gaming; digitising our content to create stimulating and resonant shared experiences that help teams improve in areas like decision-making, prioritising, communication, problem-solving, team leadership and more.

Remote teams need sophisticated solutions to keep focused and flourishing. \_Muster\_ is a one-stop shop for self-supported team-enhancement, incorporating our award-winning, transformative digital content.

[0]: <https://news.gallup.com/poll/311375/reviewing-remote-work-covid.aspx>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LOCATE BIO LIMITED	Manufacturing a spinal regenerative medicine in the East Midlands	£208,583	£166,866

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The UK has invested for many years in the science of regenerative medicine. This field is delivering on its promise to repair human tissues. Given the UK's strong position in the science that underpins this area we should also aim to develop a world-leading industry that exports regenerative medicines across the world. This project aims to demonstrate that the UK can lead in the manufacture of one class of these medicines, called regenerative matrices. These products are materials that are used by surgeons to regenerative tissue after implantation in patients. The manufacturing of these products shares some processes with those used for the pharmaceutical industry but there is a need for innovation.

Locate Bio is focusing on developing regenerative matrices for the treatment of patients with lower back pain (LBP). LBP is the leading cause of disability in the UK and most countries in the world. A major cause of LBP is disc degenerative disease where the shock absorber made of cartilage between the bony vertebrae of the spine lose their structure. The surgical treatment of disc degenerative disease is very expensive and patients can encounter long-term side-effects. Locate Bio's first product lowers the cost and risk of these treatments.

Most of the expertise for manufacturing of these products lies outside of the UK. Under this SMART Award, Locate Bio will develop the manufacturing processes for regenerative matrices to lay the foundations for product launches in China, USA, UK and the EU.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SUSTAINABLE PIPELINE SYSTEMS LIMITED	Sustainable automated pipeline construction development for MASIP	£214,956	£171,965
RIDGWAY MACHINES LIMITED		£213,328	£170,662

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

SUSTAINABLE PIPELINE SYSTEMS LTD is developing game changing new technology for the installation of pipeline infrastructure that incorporates distributed sensors in a spiral configuration during manufacture of the pipe to provide an intrinsically intelligent pipe (iPIPE). An automated mobile manufacturing system (MASIP) offers to halve total installed pipeline cost, more than halve the environmental impact and greatly improve the logistics of pipeline installation.

Pipelines constructed in this way have a major role to play to transport (and store) vast quantities of energy (in gas or liquid form) over large distances, delivering the underlying infrastructure for net zero HGV, Train as well as general gas transmission use. By using these at higher pressures with Hydrogen, a lower carbon intensity can be achieved in the energy mix. Our spiral wound optical fibre innovation introduces the prospect of real time continuous monitoring to provide a digital platform for the pipeline network of the future.

The project addresses a huge global market for onshore pipelines which market research has estimated to exceed \$50bn by 2025\ . It can be argued that the conventional manual pipeline construction and integrity monitoring processes are no longer sustainable. The availability of sustainable pipeline construction and monitoring technology will be a critical enabling factor in the introduction of hydrogen gas as an energy carrier for heating and industrial power. Without widespread hydrogen fuel then heavy transport and industrial processes as well as domestic heating are all unlikely to be able to meet net zero climate regulations even by 2050\ . This is recognised in a number of government targets and industry objectives (including National Grid's recently published Future Energy Scenarios 2020) which aim to develop a number of hydrogen projects over the next few years.

This offers to be genuinely disruptive technology that will develop its own supply chain in the UK creating many highly skilled jobs for the future. The project also offers large scale opportunities in the international market place.

This project will focus on the core technical and manufacturing innovations needed to be able to automate and scale up the mobile manufacturing process

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
COUNT TECHNOLOGIES LTD	A revolutionary data notebook that allows real-time collaborative analysis of big data that can help teams make improved decisions 7x faster while working remotely.	£206,550	£165,240

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Count Technologies Ltd. is a rapidly developing SME that was founded by Oliver Hughes and Oliver Pike. The current COVID-19 pandemic has forced 49% of workers in the UK to work remotely, and 70% of these workers project that they will continue working from home after the pandemic \[YouGov, 2020\]. To ensure successful remote-working and increase a business's productivity, organisations must implement platforms that support data-driven decision-making and effective communications amongst team members. Count is a data notebook that will allow multiple remote-working users to query a SQL database, visualise the results, and discuss them all in real-time. This solution is projected to increase the speed of decision-making by 7x.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MACUSOFT LTD	An artificial intelligence (AI) Macular Disease treatment decision tool for patients with wet age-related macular degeneration, diabetic macular oedema, and retinal vein occlusion.	£169,994	£135,995
Guy's and St Thomas' NHS Foundation Trust		£48,214	£48,214
Macular Society		£4,320	£4,320

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Three common diseases affect the centre of the back of the eye and cause devastating loss of vision and blindness: i) wet Age- related Macular Degeneration (AMD); ii) Diabetic Macula Oedema (DMO), and; iii). Retinal Vein Occlusion (RVO).

Recent breakthroughs in imaging of the eye and in treatments have transformed the outcome for patients with these diseases, most notably through intravitreal injections. However, there has been a staggering increase in the need for these injections, caused by our ageing population and the rise in lifestyle-related diseases such as diabetes. As a result, there aren't enough qualified and trained clinicians to provide these important treatments. Delays are occurring for patients leading to a rise in cases of sight loss, and health systems are struggling to keep up with demand.

Macusoft will use sophisticated software to automate and support the way in which patients are recommended for treatment, enabling ophthalmologists to spend more of their time on administering sight-preserving treatments to patients who need them. This will ensure that more patients are treated in a timely manner, and that more permanent sight loss is prevented. The software will be rigorously tested so that we know it works well, is accurate and is safe.

This software will allow more patients to be seen and treated, helping overburdened eye clinics to deal with the increased demand for their services.

Our research plan is to develop the software, to test it with a controlled research study so that we know it works well, is accurate and is safe. Once tested it will then be made available for use across the NHS and worldwide, helping many more patients to receive the treatment they need.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ANIMATED TECHNOLOGIES LTD	ONCON - Inclusive & Advanced Online Conferencing	£161,672	£129,338
Bangor University		£29,470	£23,576
MENAI SCIENCE PARK LIMITED		£58,216	£46,573
ZERO DEPENDENCY LIMITED		£173,745	£138,996

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

ONCON represents innovation and collaboration that is born of crisis; in this case, a global one, COVID 19. ONCON was imagined as a way to help businesses network and conference online in ways that are closer to real-world situations, where deals are made around coffee pots and inclusive events run smoothly along a timeline. By delivering an online conferencing platform that meets the needs of modern-day conferencing and exceeds the value of attending physical conferences we will decarbonise the events industry and make them an inclusive platform for all.

COVID 19 has shown that engagement in events has actually increased for many training providers and event organisers, due to online events being much more accessible from a travel and convenience perspective. This trend will continue post-COVID, now that the mindset has changed. The biggest issues that event organisers face is that current tools do not provide a seamless single solution to creating, managing, running, collaborating and promoting inclusive events; ONCON does.

ONCON is conceived with intuitive features, such as multi layered-interactive event timelines, it has security built-in, plus innovative audience engagement features and live language and translation integrations meaning accessibility and inclusion form a key part of its foundation. It will integrate transcript in many languages and develop a sign-language engine. In summary; features that will see the online provision of conferencing exceed the physical experience leading to an inclusive society and decarbonisation of an industry that's worth £19B to the UK P.A.

ONCON is designed to make creating, hosting, and collaborating pure online events or mixed live and online events intuitive and much easier than it currently is, whilst offering unique cultural and language benefits which its competitors do not. The future will not be the same when it comes to online events and the current tools aren't up to the job.

Built by a partnership from academia and industry based at an events venue at the heart of innovation, we have a team ready to deliver this vision of the future of conferences; not just in the UK but globally. This is the impact that we seek, a positive one born from the crisis leading to decarbonisation and growth for the UK economy.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CALLA LILY PERSONAL CARE LTD	New sustainable biopolymer and production process development for a novel period care product	£228,668	£173,788

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Callaly is a UK based developer and manufacturer of a highly innovative menstrual period care product, invented by a gynaecologist, that is a "hybrid" tampon and pantyliner. The innovative product, called a Tampliner, combines the best features of both products and specifically relies on a patented innovative impermeable sheath that enables the tampon to be hygienically inserted without contact with menstrual blood.

Callaly established UK based Tampliner production in late-2019 and created a novel direct-to-consumer sales and postal distribution model. Women can manage and customise their personal requirements from a suite of Callaly products (comprising Tampliners and conventional period products). The product and business has proven to be popular and at present the team has a growing subscriber/consumer base of over 5,000 subscribers providing over 50,000 products a month.

Callaly has a commercial ethos that is strongly influenced by ecological principles, and the team aspires to develop the novel & innovative Tampliner to the highest sustainability standards. All of the Tampliner parts with the exception of one item are biodegradable. This item is the heart of the innovative Tampliner: a cylindrical sheath component membrane that secures the tampon to the pantyliner component of the Tampliner. This sheath is made from a non sustainable polymer. During the early stages of product development, Callaly was advised that a biopolymer alternative would have to be specially developed for the Tampliner. The disruption of the Covid-19 pandemic and the increased consumer sensitivity to sustainability has now emphasised the need for Callaly to address this development challenge to the business.

Callaly is seeking Innovate UK investment funding to investigate a number of possible biodegradable polymers and most importantly to test them to see if they can be used in place of the existing conventional plastic part. The enclosed project enables Callaly to collaborate with experts in sustainable plastics--- Imperial College London and Aquapak (industrial producer of biodegradable plastic).

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DARESBURY PROTEINS LTD.	Scalable, sustainable and cost-effective antigen manufacturing platform for a rapid mobilisation during the current Covid-19 pandemic and possible future outbreaks	£217,857	£174,286

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The 21st century ushered the advent of coronaviral pandemics such as SARS in 2002-2004, MERS in 2012-2018 and presently Covid-19\.

These infections killed hundreds of thousands of people yet we do not know how to treat or prevent them. Our inability to identify people affected by Covid-19, has led to the spread of the infection on a global scale, causing thousands of deaths on a daily basis. Desperate lockdown measures to stop the pandemic brought many countries and vast geographical regions to a standstill. All these overwhelming effects of Covid-19 could be minimised if not completely prevented by timely and accurate ways to detect the infection.

Antigen and antibody detection tests are such methods which can detect the current or past viral infection and are indispensable for the control of Covid-19 spread. However, the development and production of reliable tests require time and the availability of their key components -- viral fragments produced recombinantly. The global scale of pandemic puts a massive strain on the science and industry to supply this key component of diagnostic tests.

At the time of writing, there have been 20 SARS-CoV2 antibody kits received Emergency Use Authorisation by Food and Drug Administration, FDA. None of those originated in the UK.

Immense pressure on the Government to enable laboratory-based mass serological testing has hastened the adoption of the inferior quality kits sourced from abroad, the performance of which would have been found to be unacceptable in non-pandemic circumstances. Domestic industry can and must turn the tide.

Daresbury Proteins will create a sustainable production platform and deploy their technology to manufacture much-needed quality antigens in the shortest timeframe to expedite the production of reliable and affordable Covid-19 testing kits. The availability of such a scalable and cost-effective platform will eliminate any issues with supply chain in the future and warrant a world-leading position of domestic diagnostic industry.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IPEC LIMITED	Virtual Acceptance Commissioning	£163,149	£130,519

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

During the Covid-19 pandemic, there are currently travel restrictions and local quarantine requirements which does not allow commercially viable any onsite commissioning services. Hence, there are no commissioning of Partial Discharge (PD) installations currently being performed and thus electricity network companies are increasingly concerned that their networks are not being monitored, and no warnings or alerts to any potential future network failures.

The commissioning process is critical in any PD installation project. It ensures the installation of equipment and systems is checked and tested, working safely and efficiently, test results are in accordance with any local standards, and to ensure it meets/exceeds customers' requirements specifications. Occasionally, this also involves investigating problems and repairing any faults, performing testing and analysis, producing test and commissioning documents.

IPEC proposes to develop a commissioning and diagnostics package that will allow local engineers to perform the technically complex task of commissioning or maintaining a PD monitoring system. The innovation is unique as this addresses the current PD industry commissioning methods of sending skilled PD engineers to customers' installation sites globally that no other PD company has been able to develop and resolve due to the technical complex testing required.

The new commissioning package will significantly reduce international travel thus contributing towards net zero carbon emissions whilst also influencing the quality of life e.g. physical health, social connection, satisfying employment, and levels of equality, whilst increasing revenue from customers preferring to use eco-friendly suppliers and less dependency on skilled PD engineers required onsite.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GREEN SOLUTION ENGINEERING LIMITED	Reducing the 'levelised cost of energy' in offshore wind through a disruptive fault diagnosis technology, SmartCMS	£211,605	£169,284

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Reliability is vital in the growth of wind power, especially offshore installations, currently generating 7.7% of UK electricity. Preventive maintenance, enabled by condition monitoring systems, increases reliability and availability of wind farms as well as reducing maintenance costs, leading to a lower 'Levelised Cost of Energy' (LCOE). Green Solution Engineering Ltd has developed SmartCMS, a unique condition monitoring technology which utilises the electrical measurements available in the converter to detect and diagnose both mechanical and electrical faults in the wind turbine drivetrain (i.e. gearbox, bearings, generator and converter). Having been successfully tested on a laboratory test bench, this project aims to take SmartCMS to the next phase of exploitation through assessment of its technical performance and commercial benefits through testing in a pilot wind turbine drivetrain and study of the economics with respect to net reduction in the LCOE.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADAMAS WIND LIMITED	ShearWin - Development of a shearography system for on-site inspection of wind turbine blades.	£101,000	£80,800
FRONT TECHNOLOGIES LTD		£158,514	£126,811
INNERSPEC TECHNOLOGIES UK LTD		£216,037	£172,830

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Renewable Energy is a global requirement and increasing in demand due to decarbonisation and the need to reduce pollution generated from brown energy.

There were 341,320 wind turbines spinning around the world at the end of 2016, which equates to a capacity of 486.8GW globally. The total capacity at the end of 2019 is 651GW, an increase of 10% compared to 2018. Although there is an increasing demand of wind turbines, market surveys show that current inspection methods are inadequate. Due to WTB's large size and stress caused by wind gusts, wear is fast, thus there is a regular need for inspection and maintenance.

There are a variety of inspection techniques that have been widely used in the wind industry, but few of them can be applied to inspect a wind turbine blade (WTB) onsite and in-situ. Ultrasonic testing is a pointwise contact inspection technique for homogeneous materials, thus is difficult to use to inspect the inhomogeneous composite material parts of a WTB on-site. Radiography has safety issues because of the use of radiation. Thermography is a promising NDT technique, but its capability of inspecting a WTB on-site is not proven, because the ambient temperature change due to wind flow will add strong noise to the captured thermal images. It is also highly susceptible to emissivity of the blade surface, which means any changes in emissivity caused by rain, snow and other contaminations will result in false alarms. The use of drones to inspect wind asset including WTBs is attracting more attention in recent years, however it is limited to visual inspection for surface defects only.

Shearography, as a non-contact inspection technique, is widely used to inspect various materials including composite in industry to identify subsurface defects. However, it requires a very stable working condition such as in a test lab or a test facility. The use of shearography in-situ for WTB inspection is not yet fully demonstrated, because WTBs are in constant vibration even when they are stopped for maintenance and inspection at good weather with low wind speed.

We have identified a way to address the stability problem for shearography by introducing a stabilising mechanism to the shearography so that it can work properly on a WTB in-situ. The ShearWin system will be the first shearography product in the world that allows human inspectors to deploy it on a WTB in-situ. A prototype system will be developed at the end of the project. With the technique protected by a patent (pending), the project consortium is confident that the innovative ShearWin product will be further developed into a commercial product to reach the wind energy service market within 1-2 years after the successful completion of this project.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CAMBRIDGE PHOTON TECHNOLOGY LIMITED	New Materials for a Solar-Powered Recovery	£218,459	£174,767

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

This project will speed the development of Cambridge Photon Technology's (CPT) photon multiplier film, a radical improvement to silicon solar photovoltaics with the potential to increase their power by as much as 20%. Innovate UK funding will help CPT to (1) recover from delays caused by the pandemic, (2) establish UK leadership in a vital industry for the future, and (3) fight climate change by increasing the supply of affordable clean energy.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VOCHLEA MUSIC LTD	Developing a software only product to remove hardware dependency	£167,448	£133,958

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Vochlea Music is a creative technology company. Founded in 2017, we work at the cross section of music and technology. In 2019 we launched award winning AI vocal recognition technology, the Dubler Studio Kit.

Comprised of the intelligent Dubler desktop application and custom USB microphone; the Dubler Studio Kit is a ground-breaking innovation in music technology. It allows users of mac and PC computers to create, control and manipulate audio samples and software instruments live, using their built-in tool for audio expression -- the voice.

We truly believe that real-time vocal control for music making is going to be massive, and a fundamental change to tech interaction! Kids in playgrounds all over the world will be beat-boxing out drum beats and humming bass-lines. Musicians on tour will be sketching out ideas using their voice, and artists on stage will be performing live using our software.

To make this vision possible we need to make our products more accessible, and for that we want to undertake a project to make Dubler compatible not just with our own custom USB microphone but any audio input.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AUTONOMOUS MANUFACTURING LTD	Artificial Intelligence for Production Automation (AIPA) - Development of an Machine Learning Platform for Additive Manufacturing	£175,489	£140,391

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The crisis caused by COVID-19 has significant economic impact on the UK economy. Over 25% of manufacturing staff have been furloughed and especially R&D Departments face a 17% reduction in R&D budget (IHS Markit, COVID-19 Automotive R&D Impact Survey). Over 50% of respondents postpone deployment of innovative technologies.

Additive Manufacturing (AM) faces a threat due to impact of COVID-19, as innovative technologies are being delayed. As a direct response, AMFG needs to offer the market a solution that offers:

1. Process automation for AM [AMFG offers a solution for this]
2. Rapid deployment of the AMFG solution within a customers environment [Focus of AIPA, \*\*this innovation project\*\*]

### \*\*Role of AMFG:\*\*

AM has been in the news, as companies like Dyson and JLR use AM capacity to build face masks and ventilators. AM will also support global supply and value chains, as global companies evaluate reshoring of manufacturing activities to the UK (NatWest, Manufacturing insights: the pros and cons of reshoring).

AMFG is a world leader in Process Flow Automation for AM and we have successfully deployed our software into large customers such as ArcelorMittal, Henkel or BMW.

Why AMFG needs this:

AMFG sees an increase in interest in Additive Manufacturing from global companies. However, our potential customers suffer from significant cuts to R&D budgets and a backlog of work. In order to capture the current trend in the market, AMFG will develop a solution that allows to rapidly deploy our software within a customers environment.

The current process is to go through a Proof Of Concept (POC) with potential customers, which typically takes 1 year to complete and costs around £50000. This is due to an iterative process, where AMFG and customers engage in frequent meetings to elicit requirements, understand our customers environment and develop bespoke concepts. A POC is also a risk for AMFG and our customers, as it depends hugely on the experience of the Project Manager (on customer side). This is a significant drain on resources and results in sub-optimal utilisation of production lines long-term due to potential to miss important requirements early on in the development process (when these issues are easy to fix).

### \*\*Why AIPA is innovative:\*\*

AMFG suggests to take this to the next level and completely automate the initial stage of the POC. AMFG will achieve this by using novel Machine Learning algorithms to determine the best solution for a customer. This will replace an iterative and risky process by capturing best practice in the market from our

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

customers.

As a result, AIPA will be an interactive questionnaire that automatically suggests requirements based on our customers self-evaluation, which will be used to develop the required features. Additionally, AIPA can be used as an ongoing self-assessment to confirm the development is on track and according to our customers requirements.

AMFG expects that we will be able to triple the number of successfully completed POCs from currentyl 12 to 36 per year.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BASE MATERIALS LIMITED	Project X	£200,986	£160,789
CAR PARK REPAIRS LIMITED		£81,593	£65,274
NCC OPERATIONS LIMITED		£89,507	£89,507

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Our project concerns developing a sustainable composite tooling board.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FRESH MILK SOFTWARE LIMITED	FloQuote	£229,770	£174,625

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The Field Services market in the UK is worth GBP 5.8 billion and is growing at a compound rate of 11% a year. It is a significant provider of tax revenues for the Government, but it relies heavily on estimates and quotes undertaken at the client's property to secure business.

Homeowners and landlords will obtain 3 quotes before selecting a supplier so for every 3 companies that quote only 1 can ever be successful.

Taking London as an example, each appointment takes 2 journeys at an average of 40 minutes each. In rural areas this can be even longer. Adding up the time and expense taken to travel, the time to build the quote, parking and congestion charges shows that each appointment costs the company £70 to £100\.

There are 3 areas of concern here.

1)As two of the competing companies will be unsuccessful, four of the journeys are wasted. This is a significant environmental impact.

2)Making those journeys means lots of people are out meeting others, potentially spreading the Covid 19 virus far and wide

3)Travelling to quote is time consuming and expensive

The solution is not to make those journeys at all - or at least for the initial estimate.

This can be achieved by asking the client to send the required information to the tradesperson using technology. Videos, images, schematics and information on the project can be sent to the tradesperson to enable them to make an estimate without ever visiting physically.

However, there are limitations on getting this information easily, simply and quickly for both the client and tradesperson. Email has limits for file sizes making it time consuming and overly complicated for the average person to send in a video for example. This is a barrier for adoption. If it is hard for the client to do they won't do it.

Similarly, for the tradesperson, extracting this information is time consuming and convoluted. Often when information comes in there is no record of who it is from, which makes cataloguing it and retrieving it very hard.

Whatsapp and other messaging platforms are seemingly perfect for this process. The advantage they have is they have mass market adoption, and everyone knows how to use them making transfer of data easy. However, uncoupling that information at the tradesperson end is a difficult and manual process. Again, this makes it a significant barrier for mass adoption.

Our software application is designed to make this process simple for both parties. By automatically extracting and cataloguing information and converting into a usable format from the messaging app that can be 'plugged into' any existing CRM, database, quoting tool or even word document. Thus, allowing the tradesperson to make an estimate for their client very quickly.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

The outcome means there is no need to take a physical journey to make an estimate at all. Six journeys saved, environmental impact reduced, no physical contact to spread the virus, costs to service significantly lowered, customer and tradesperson satisfaction increased.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ESQUARE INNOVATIONS LIMITED	Strolley: A Coinless Smart Trolley Lock with Shopper Tracking and Data Analytics	£217,679	£174,143
PZOC LTD		£207,555	£166,044

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The outbreak of Covid-19 is unprecedented and its impact on the retail sector has been profound. For example, Britain's biggest retailer [Tesco][0] expects to take a hit of up to 925 million pounds (\$1.1 billion) from the costs of dealing with the coronavirus pandemic (CNBC). This is not unique to Tesco nor Britain.

A bigger impact in long term is expected to come from the changes in consumers' behaviours as a result of Covid-19. These changes will range from how consumers shop to what and where they shop. One area where the change is already evident is use of shopping trolleys. Fewer consumers are now preferring to use trolleys, especially those with coin locks as they are concerned of transmission of virus via coins.

Retailers, especially supermarkets are having to adapt to this new world quicker than anticipated. Part of this change will include understanding shoppers' behaviours in physical stores so that retailers can improve sales by optimised store layouts.

To address these market needs, our innovation will deliver a coinless trolley lock with shopper tracking and data analytics that will help retailers to:

- \* Improve sales: By understanding how a shopper interacts with the store, how long they spend in different aisles can help retailers determine, for example, optimal placement of demos and special display locations, etc... effectively helping for store layout optimisation.
- \* \*\*Encourage use of trolleys:\*\* By incentivising consumers using trolleys. These incentives could include discount coupons, reward points, prize draws, etc..
- \* \*\*Improve customer satisfaction:\*\* By freeing consumers from having to use coins to unlock trolleys
- \* \*\*Better prepared for pandemic times:\*\* In times of a pandemic, monitor traffic on the shop floor, which can help with social distancing guidance.

[0]: <https://www.cnbc.com/quotes/?symbol=TSCO-GB>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LIBERTY PRODUCE LIMITED	PProduction Optimisation Learning Engineering Autonomous Framework System (PROLEAFS)	£174,824	£139,859
ALGAECYTES LIMITED		£90,000	£72,000
CROP HEALTH AND PROTECTION LIMITED		£97,270	£97,270
ICENI LABS LIMITED		£93,569	£74,855
The James Hutton Institute		£43,417	£43,417

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Farmers are under unprecedented pressure to increase yields, while facing restrictions in the use of agrichemicals. This pressure is driven by increased protein demand, the growing global population, climate change and political instability and now COVID-19. The potential for food destruction by border closures in early 2021 is real and could lead to shortages in the availability of fresh produce that normally would be imported from continental Europe.

As traditional farming practices are ill-equipped to meet the demands of the future, a new approach to food production is needed, alongside the greater public acceptance of alternative crop and protein sources. Transformative innovation is essential, and a combination of approaches is required to address these challenges. Namely:

- \* Alternative sources of protein, such as algae and insects, which can be produced using 80% less crop material than beef.
- \* Alternative, nutrient-dense crop production technologies, including vertical and indoor-farming technologies, to free up land for carbon sequestration.

Current farming technologies do not allow foodstuffs to be produced sustainably and at a price that most people can afford. This project is designed to address these challenges through a collaborative multi-disciplinary approach. By bringing together indoor farmers of crops, algae and insects with data scientists, technologists and researchers, we can develop technology strategies that will work across the whole sector. These strategies will leverage more significant benefits than a siloed approach, and will truly help achieve a sustainable, productive, net-zero emissions food production system.

By combining multiple and different types of food production technologies we can obtain efficiencies in operation that these technologies would not be able to achieve on their own.

These efficiencies are significant enough but they will directly improve the viability of investment opportunities in the indoor farming sector

Highly complex design and development environments such as the aerospace and maritime sectors use a design methodology called the systems of systems engineering approach. We propose to integrate that same methodology within food production capabilities.

This project will provide solutions that overcome the technical bottlenecks which collectively impact these fledgeling production systems. Our novel combination of production systems will allow us to determine their scope for resource-efficient circularity, through the utilisation and bioconversion of waste products. It will improve their economic viability, sustainability and adoption, and accelerate the UK as a world leader in agricultural technology development.

This project will:

- \* Improve operational efficiency through the optimal development of control systems.
- \* Increase crop quality and productivity by networking data streams to allow Controlled Environment Agriculture (CEA) growers to make better decisions about crop management.
- \* Exploit and expand current knowledge of crop research, data analysis, machine learning and low-cost IOT-based sensing platforms to reduce the cost of production and provide higher-quality produce to help improve health and well-being.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

We will develop the next generation of food production technologies that will enable the full range of indoor food production systems to enter mainstream consumer markets, while significantly strengthening the UK technology export market, by helping move UK food production towards a sustainable, productive, net-zero emissions future.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PROMISING OUTCOMES SERVICES LIMITED	AI aided customer expectations and performance insights platform to drive business growth	£209,612	£167,690
STRUCTURING SERVICES LIMITED		£212,695	£170,156

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The aim of this project is to build an AI based Customer Expectations and Performance Feedback platform to help businesses address the critical need to re-evaluate how they adapt, serve and grow their customer base in a market that continues to be disrupted by Covid19\.

Understanding and engaging customers around their changing needs is currently possible through various forms of qualitative research, but sadly this puts it out of reach of the many company budgets who need to adapt in order to survive during the current crisis and economic uncertainty.

Recent improvements to Artificial Intelligence and Natural Language Processing means we believe it is now possible to build these far superior qualitative customer insights methods into an online Customer Feedback platform.

Such a platform will enable thousands of businesses to access an affordable method to understand, engage and grow their customer base far more accurately, faster and with higher returns on their investment and efforts than they currently get than the simple customer feedback methods.

In turn, this will also help build customer confidence so that commerce can flourish and grow, whilst minimising travel and health implications of traditional face to face qualitative research methods.

### **\*\*Who we are\*\***

PO is a B2B consultancy that helps companies re-evaluate and adapt pivotal customer, employee and even internal team experiences using a unique and proprietary "performance against expectations" method.

### **\*\*Summary scope of project\*\***

PO's unique customer research method is rooted in Expectations Theory. The degree to which a customer's explicit and implicit expectations are understood and met, determines their feelings of satisfaction/dissatisfaction and their propensity to buy, re-buy or recommend. Understanding and managing performance against expectations is a fundamental concept.

Using our unique research method, we wish to use and build AI and Natural Language processing to:

- \\* Gather expectations of a company's customers,
- \\* Measure the performance received against the expectations.

### **\*\*The COVID Impact\*\***

- \\* The pandemic has changed consumer and B2B customer expectations. All organisations need to respond to this change. Critically, while their customers'

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

needs may have not changed, customers' expectations of how their needs will be met may have changed dramatically and rapidly.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOLIUM FOOD SCIENCE LIMITED	Control of Campylobacter by CRISPR/CAS systems	£169,655	£135,724
University of Reading		£71,432	£71,432

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Agriculture faces many major and diverse challenges including the need to meet the demand for increased productivity in the face of a growing world population whilst being effective custodians of environmental resources by being highly sustainable. For animal production, achieving these global goals whilst ensuring the highest standards of health and welfare, which incidentally in the contemporary context of growing antibiotic resistance impacting on human health, must rely upon prudent use if not "no use antibiotics ever" in maintaining animal health. This is a stretching aim that requires innovative, disruptive new pathogen control measures.

Growing poultry for meat is one of the fastest growing sectors for protein production globally. Whilst biosecurity measures and some feed additive interventions impact on health and welfare of the birds, the human zoonotic *Campylobacter jejuni* remains a significant human health issue with poultry still the primary source of human infections. The latest available government figures show reported number of cases increased from 52,381 in 2016 to 56,729 in 2017, an increase of 4,348 cases ([<https://www.gov.uk/government/publications/campylobacter-infection-annual-data/campylobacter-data-2008-to-2017>][0]) and this rise is despite improving biosecurity management practices on farm and through the food chain.

The purpose of this proposal is to complete the development of a novel, disruptive technology to contribute to the reduction of *Campylobacter* illness in humans by interventions at production level, in poultry. To date, Folium Science has demonstrated the ability to selectively kill *Salmonella* by redirecting the bacterial immune system, the CRISPR-CAS system, to 'self-destruct'. This proof of concept is now being developed for commercial release as part of control measures on farm to reduce the burden of this pathogen. The first product is a well established probiotic that carries CRISPR-CAS programmed to target with exquisite specificity all *Salmonella* serotypes. The probiotic delivers the system to *Salmonella* inducing inhibition of growth.

The challenge that remains is to take this technology and demonstrate that it can be reprogrammed to target *Campylobacter jejuni* that, whilst having little effect in poultry as they grow, are major pathogens in humans. A programme of work to develop a pre-commercial prototype "Guided Biotic" specific for the control of *C. jejuni* was interrupted at the design stage by laboratory closure and furlough of staff due to COVID19. This application seeks to restore the programme. Having designs already made the steps to a pre-commercial prototype include (i) validation of restriction of the target without any off target effects, (ii) delivery using current probiotic delivery systems, (iii) lab-scale production and (iv) *in vivo* testing in poultry. Given designs in place and the systems already established this is achievable within the lifespan of this proposal.

[0]: <https://www.gov.uk/government/publications/campylobacter-infection-annual-data/campylobacter-data-2008-to-2017>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EXACTMER LIMITED	Sustainable Manufacture Oligonucleotides - SuManO	£217,885	£174,308

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Polymers are long molecules comprising repeated chemical units known as monomers. Some polymers, such as polyethylene glycol (PEG), comprising ethylene glycol (Eg) monomers, are very useful parts of sophisticated nanomedicines, because they regulate the way that a medicine is transported around and retained in the body. Chemically modified oligonucleotide polymers (oligos) are used as therapeutic agents for a variety of diseases (muscular dystrophy, hepatitis, atherosclerotic cardiovascular disease) and recent studies suggest they could potentially be used as antiviral or anti-inflammatory therapies for CoV infections.

It is extremely difficult to make polymers such as PEGs and oligos accurately, because chemical techniques often add a few more or a few less monomers to the chain. For example, in making Eg112, a PEG polymer with 112 repeated units and a molecular weight close to 5kDa, current processes also make Eg111, Eg113, Eg110, Eg114, and so on, so that the material is known as polydisperse. This is a problem for use as part of a medicine, because the different chain lengths can act in different ways in the body, and analysis of multiple species is harder to do accurately.

EXACTMER is a start-up company which has licensed a breakthrough new technology invented at Imperial College London- Nanostar Sieving. A hub molecule with three or more arms is used to form a macromolecular Nanostar. Monomers are added to each of the arms, one by one, to form polymers with an exactly controlled sequence of monomers. After the addition of each monomer, all the debris are removed by molecular sieving through a specially designed membrane. The process is repeated over and over until the desired number of monomers has been added, and then the polymers are cut off the hub and recovered, with all polymer molecules having the same, exact number and sequence of monomers. Nanostar Sieving can produce purer oligos than conventional solid phase synthesis methods; and because it is a liquid phase process it can be scaled to the kg-scale with a significant reduction of manufacturing costs.

During 2019 we have carried out paid trials to show that Nanostar Sieving can produce purer oligos (our primary market) than conventional technology, and we have sold small quantities (1g) of PEGs (our secondary market). We generated £235K in revenue, indicative of strong interest from a range of customers. Now we must quickly capitalise on this by creating a single-stage separation synthesiser Nanostar-10, to make our process more efficient and reduce the solvent consumption. This synthesiser will be used to manufacture 10-20g batches of oligos and prove the process resource efficiency and scalability. Success in this innovation project will provide the technical basis for EXACTMER to invest in 1kg scale manufacturing in 2022, rising to 10kg scale in 2023/24. This project will establish Nanostar Sieving as a competitor to the current state-of-the-art, expensive solid phase synthesis. Exactmer will strive to become the dominant global producer of exact, high value polymers, based in the UK.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BINDING SCIENCES LIMITED	Development of a sustainable urinary continence management device to help reduce covid-19 infection risk	£218,214	£174,571
Buckinghamshire Healthcare NHS Trust		£32,489	£32,489
Oxford AHSN / Oxford University Hospitals NHS Foundation Trust		£31,198	£31,198

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project will complete the development of a novel urinal that enables elderly and infirm users to urinate unaided whenever the need arises, thus increasing their independence and dignity. Although designed specifically for female users, the device is unisex and suitable for all ages. Key user benefits include:

- \* Ease of use for those with restricted physical mobility, reduced manual dexterity (for example, arthritis sufferers) and those with impaired vision;
- \* Convenience and compostability - it's pocket-size, there's nothing to clean, and after use it can be disposed of as green waste;
- \* Reduced call on carers' time to assist with loved ones toileting needs.

The design has been developed with significant input from incontinence sufferers and experts and addresses an area of significant unmet need.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FIBERIGHT LIMITED	ReSuB - Renewable & Sustainable Biomass	£217,962	£174,370
LCA WORKS LIMITED		£45,170	£36,136
WESTERN BIO-ENERGY LTD		£178,652	£142,922

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 has impacted many sectors; one such sector is the waste management and recycling industry. The amount of waste generated by households in the 'first wave' of the pandemic has increased significantly, whilst the collection of recyclables has been suspended by many local authorities. The current waste management and recycling sector struggles to efficiently cope with changes in waste volumes and composition.

In parallel there are calls for a 'green recovery' for the UK, with waste management, recycling and renewable energy at the forefront of the much-needed transformation.

The ReSuB (Renewable & Sustainable Biomass) project responds to both these challenges. The project will demonstrate and develop new value chains and markets for recycled paper, simultaneously supporting the UK's growing renewable energy industry.

Fiberight has developed an innovative circular economy solution to create value-added products from residual waste, which is typically landfilled or incinerated. The ReSuB project will demonstrate the recovery of pulp from residual waste and the manufacture of products for the biomass fuels market. This market is actively searching for alternative products to current wood-based materials due to shortage of supply and therefore increasing costs.

The project will carry out market testing with a biomass plant producing electricity.

The ReSuB project will generate significant positive environmental impacts by diverting recyclable waste from landfill, by recovering valuable materials to be used again, by displacing virgin materials and helping to combat climate change. There will also be wider advantages of developing UK industry, with associated job creation and wider socio-economic benefits.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FSD ACTIVE LIMITED	Developing Active Mass Dampers to enable post-COVID19 use of modular construction in vibration sensitive facilities	£166,934	£133,547

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

During the COVID-19 crisis, a significant problem has emerged of a backlog in medical treatments that have been postponed whilst the NHS and its staff understandably focused on the immediate threats caused by the pandemic. Now that we are exiting from the most severe constraints of the lockdown, the NHS urgently needs to deal with the backlog, and it must do this within the constraints of increased social distancing and hence increased requirements for treatment space. A programme of rapid healthcare building development is required and has already been initiated.

Modular buildings, which are a high quality, factory produced, rapidly constructed and highly sustainable form of modern construction, will provide a key solution to the need for rapid construction of new buildings for healthcare. We are working with the SEISMIC-II consortium of construction companies, who have been developing modular buildings for schools, to urgently adapt their designs for healthcare facilities which have much more stringent vibration criteria than schools. This can be done very efficiently and effectively through the use of active mass damper (AMD) technology - a new and exciting technology that allows the development of efficient, low cost and environmentally sustainable buildings that have excellent vibration performance.

Vibration performance is of crucial importance for medical buildings. Vibrations can disturb building occupants, particularly sick and vulnerable patients, and can also affect the performance of sensitive healthcare equipment. This is a problem that has affected healthcare and laboratory buildings in the past, including both those constructed traditionally and those made from modular construction. AMDs are autonomous devices that sense floor vibrations and generate mechanical forces to cancel them out. They can be conceptualised as 'active noise cancelling headphones for floors'. They are significantly more effective than previously used methods of floor vibration control and have the potential to provide a solution to the conundrum of providing more efficient and sustainable buildings (i.e. with reduced material consumption) whilst still maintaining excellent vibration performance.

In the longer term, AMD technology will provide the construction sector with a much-needed competitive advantage as it is an advanced technology that can provide a step-change in building performance and efficiency. It will increase the uptake of more sustainable structural forms, such as constrained layer timber and modular construction. Buildings and construction account for approximately 40% of global CO2 emissions so the environmental impact is potentially huge. Bringing the technology to market will generate significant new economic activity, create engineering and manufacturing jobs and provide a new commercial advantage to UK engineering and construction firms who adopt it.

In summary, this project will bring a new and advanced technology to market, contributing significantly to the efforts to rapidly build new urgently required healthcare facilities for the post-COVID-19 world. It will also provide the construction industry in the UK with a new competitive advantage on the world stage and will develop further much needed high-value manufacturing in the UK, providing employment at a time when it is so badly needed.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CLOUD CYCLE LTD.	Smart Surplus Concrete Distribution (SSCD)	£217,888	£174,310
CONCRETE MIXOLOGY LIMITED		£174,772	£139,818

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Waste concrete has become a global construction problem, with over 500M tonnes of surplus concrete being sent to landfill every year. The CO2 produced for the manufacture of structural concrete (using ~14% cement) is estimated at 176 kg/tonne (This is Concrete, 2017), meaning that 88M tonnes of CO2 is unnecessarily released into the atmosphere every year. To bring the concrete sector in line with the Paris Agreement, its annual emissions will need to fall by at least 16% by 2030 (Energy Technology Perspectives, 2017). There is therefore a strong need to find valorisation in surplus concrete by creating a circular economy for concrete, in turn reducing the carbon footprint of this industry.

In response, Cloud Cycle has developed an innovative solution that combines digital sensor technology in concrete trucks with intelligent analytics to calculate the volume, temperature, location & time remaining before the concrete load sets. Cloud Cycle's online platform enables concrete companies to manage wet concrete loads more efficiently, reducing waste and connecting surplus concrete with buyers, directly reducing surplus concrete from going to landfill, therefore reducing the carbon footprint of concrete production.

The focus areas of the project will be research development into the temperature of the in-transit concrete and its relation to time taken to set and distance it can travel before it sets, combined with data analytics and software/hardware integration for trial implementation in order to verify system performance and testing/validation of the business model. Cloud Cycle will partner with Concrete Mixology in this project to help develop and prove the efficacy of the technology and business model.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BALKERNE LTD	Achieving Sustainable Organisation Resilience in the Hotel Industry	£157,604	£126,083
ARARIUS LIMITED		£76,990	£61,592
LIDO BRANDING LTD		£154,435	£123,548

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

HotelEye will research, develop and implement digital procedures and processes, to empower hotels to plan, deliver and sustain operations in the era of COVID-19 and Climate Change. Thereby supporting the UK's important hospitality industry in time of need and towards a more sustainable longer-term.

Sir Patrick Vallance, Chief Scientific Adviser to the Government of the United Kingdom, warned on 16/7/20 that C-19 is likely a long-term feature of people's lives. "\_I think it's quite probable that we will see this virus coming back in different waves over a number of years\_."

Climate Change, on 4/2/20 Boris Johnson, Prime Minister of the United Kingdom, committed to ambitious objectives, "\_We want to get to net zero by 2050, so the UK is in the lead trying to do that\_."

HotelEye collaboration to assist with the above, is led by Balkerne, a software company, already providing solutions to predict perils, prevent losses and protect property in both the insurance and the property industries. Partnering with Smart Networked Environments, specialists in advanced location based services, the companies will adapt and expand their technologies into a hotel context. LiDoBranding, a leading hospitality marketing consultancy, will provide core advice on the technology and procedural requirements, as well as assisting with engagement with Small Luxury Hotels of the World, a hotel partner for the conduct of the technology and procedural trials, within a live hotel environment across some of their 36 UK independent hotels.

The project will develop innovative digital resources for the heart of the UK Hospitality Industry, which represents some 10% of UK GDP, at a time when it needs it most.

HotelEye will use the Innovate UK grant to research, develop and deliver COVID-19 resilience to every hotel through:

- \* Real-time dashboard to relay critical information;
- \* Technology to minimise COVID-19 infection risk;
- \* Digitised, auditable and corporate memory of the conduct of cleaning practices, monitoring and PPE levels, plus customer and staff records; and
- \* COVID-19 secure risk assessments and certifications.

Furthermore, HotelEye will use this change-event to improve permanently how the Industry manages its people and assets into a safe and sustainable future by:

- \* Identifying location specific risks of climate change (e.g. flooding) and prompting their successful management.
- \* On-property risk observation through technology (e.g. IoT devices).
- \* Analysing energy and water usage to prompt increased efficiency and environmental responsibility; and
- \* Installing secure digital systems for storage and management of statutory documentation (e.g. insurance contracts and health & safety certificates).

With the help of an Innovate UK grant, the HotelEye consortium will research, develop and deliver a comprehensive digital solution to enable the UK Hotel Industry to bounce back from its problems, be more resilient in the climate change era and take a leap forward in digital maturity.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NEUTRAL SUPPLY CHAIN LIMITED	Neutral Home	£215,428	£172,342
ENVISIJ LIMITED		£142,916	£114,333

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Neutral Homes is a technology and data systems company which enables homeowners and housebuilders to create affordable, net zero homes. Our approach puts the achievement of low cost, low carbon energy usage in the hands of domestic consumers. Whether that is modern new-build housing, or older, even historic homes, our unique method enables homeowners to access the most effective solutions.

At the core of Neutral Home's proposition is its Energy Hub, which acts as an "energy brain" for each household, collecting, analysing, displaying, and if required automatically switching on/off energy usage. This enables the automatic control of energy, realising up to 80% cost savings and net zero greenhouse gas emissions from agile power tariffs.

Neutral Home's key innovation is its approach to integrating existing and new technologies in order to dramatically reduce total energy costs. We cut through the overwhelming amount of data and technology choice and bring together the optimum pieces that will make the greatest saving for an individual household. This means that cheaper energy costs and lower usage rates are not just for the few. They can be within the reach of all households, helping to address the increasing danger of fuel poverty as fossil fuels are phased out in the UK.

For further details see Neutral Home's website at [[www.neutralhome.co.uk](http://www.neutralhome.co.uk)][0] .

[0]: <http://www.neutralhome.co.uk/>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPEN MEDICAL LTD	Pathpoint Restore: Joining Up Critical Illness Recovery	£220,224	£173,977

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The volume and dependency of critical care survivors now highlights the lack of a comprehensive and integrated national care pathway for patients and their carers. Pathpoint Restore fulfils the urgent need for a joined-up pan-regional platform to digitally coordinate the full critical care patient journey; from acute trust care to home-based rehabilitation.

Covid recovery needs are growing in complexity; as health systems gain deeper insight into the physiological impact of the disease, the NHS and associated care sector requires a central solution that supports immediate functional needs (physical and psychological) and tracks potentially emerging deficits.

All levels of critical care patients must now be able to access rehabilitation resources at each stage of their journey; as directed by a combination of professional assessment and patients' own articulation of need.

- \* Pathpoint Restore is an easily accessible and user-intuitive digital cloud tech solution, serving end-to-end patient pathways.
- \* Digital workflows deliver effective triage, tracking, and reviewing of cohorts of patients; crucially not limited by physical geographies.
- \* A central pathways hub allows all relevant stakeholders and caregivers to monitor and deliver treatment, synchronously or asynchronously.

There is currently no overarching national/regional system that informs decision making and helps drive patient care from the intensive care unit through to a variety of rehabilitation settings in a unified and accessible way. There exists, therefore, a lack of uniformity in the complex rehabilitation processes presented by the Covid-19 pandemic, in part a natural consequence of a novel virus and its associated knowledge gaps; yet technology is ideally placed to deliver and collate the required data.

The national requirement for joined-up intensive care has been addressed by the inauguration of Operational Delivery Networks; Pathpoint Restore serves this existing matrix of regional critical care providers with a digitised pathway solution for stratifying appropriate patients into a unique 'prescription' for home-based rehabilitation. Further, the service recognises that rehabilitation is non-linear. Continuous dialogue between patients and caregivers, with secure sharing of relevant data, is enabled via its secure clinical communication tools.

Pathpoint Restore is an iteration of an existing Open Medical service, Pathpoint ICU: a cloud-based data-driven referral and patient management system for patients escalating into the intensive care unit. Enhanced monitoring and data collection functionality provided by the Restore platform allows long term patient tracking, and integration with national data sets, during and beyond the critical post-discharge phase from the ICU.

Open Medical are the clinical and technical people behind Pathpoint patient management systems. Our products are fully focussed on serving clinical 'workflow' solutions where only electronic patient records currently exist. Pathpoint is proudly cloud-based for rapid deployment and agile customisation. Real-time coded data, and technology interoperability with existing health and social care systems, provides joined-up care practically and digitally.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LOOP INFINITY LTD	Loopcycle - DS Smith Collaboration: Project Infinity	£191,179	£152,943
DS SMITH RECYCLING UK LIMITED		£39,336	£31,469

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 has added further barriers to circular resource use by contracting global supply chains -- particularly those for high quality recyclable materials. With mounting global pressure for a green recovery, the challenge is for governments and organisations to cement circular business models within supply chains, improving their capacity for growth and resilience.

However, for this to happen, organisations must be able to:

- \* Manage used resources in a way that delivers clearly measurable circular value;
- \* Effectively feed used resources back into their existing supply chains; and
- \* Scale eco-designed products to significantly reduce overall raw material dependence.

Loopcycle aims to re-strengthen value exchanges for used resources through an AI based B2B platform that enables them to be accurately recirculated between organisations from one use to the next. This exchange -- known as a Cycle -- is captured in a secure material ledger which embeds both traceability and security.

Through a collaborative partnership with DS Smith, Loopcycle will develop an experimental Platform as a Service (PaaS) model that will allow DS Smith to trace the flow of corrugated cardboard through their supply chain. By automatically drawing product and supply chain data from a number of data-points within the Loop, the platform will use AI and machine learning to determine where losses in the system occur, and will determine the percentage of closed-loop cardboard present in each packaging line. This will enable DS Smith to provide external assurance to their clients in the form of more granular and circular metrics and, by doing so, positively contribute to the delivery of their circular goals.

For Loopcycle, this project will define the optimum conditions for success through which Loopcycle can be configured and commercialised to scale the development of circular systems en masse within identified markets to drive a greener, circular post-Covid recovery.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STREAM MARINE TRAINING GROUP LIMITED	Blended Learning for Life Critical Training in the Maritime Industry	£349,559	£174,780

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

SMT's vision is to create a new learning environment to service the global maritime industry. This will utilise a blend of technology and practical drills on vessels to create the most effective learning experience for life-critical training. Current offerings require theoretical and practical training to be performed in training centres that are accredited and certified by the relevant Awarding Bodies (MCA and MNTB).

Delegates undertaking this training and their employers face a number of logistical and cost challenges currently: scheduling training around rotas and shift patterns; organising travel and accommodation; ensuring delegates have the required pre-requisite knowledge, and planning refresher training to ensure continued compliance. These challenges have become more extreme as a result of the COVID-19 pandemic, which has led to major maritime employers ceasing travel and training for their staff. Social distancing guidelines have also severely impacted the numbers of delegates that can be trained in a training facility.

To address this major challenge, SMT plans to create a technology-based solution to enable delegates to train at a time and location that is safe and effective for them whilst achieving lower-cost, more effective training in mandatory safety subjects. The digital content will use the most effective multi-media mix for each required subject area, with the knowledge gained online subsequently enhanced on the vessel with practical drills.

This offering will be available globally to maritime companies, enabling them to standardise their learning content and assessment across their international operations. There is no current method to achieve the mandatory certification required to work at sea without having to bear the cost and risk of traveling to a training facility. Developing this solution will: increase learner engagement in the training syllabus and improve the learning experience; drive down training costs for individuals and corporate customers; and will open up a global market for SMT's offering. Having learning "on-demand" will enable delegates to schedule their learning into manageable segments that have a minimal impact on their day-to-day roles and responsibilities. Training Administrators from employing companies will also be able to view the current progress and certification achieved for all of their employees online, enabling them to identify compliance and competency gaps across their operations. This will lead to improved safety performance. The end goal will be to further develop AR and VR solutions such that the requirement for the on-vessel drills can be further reduced and eventually removed.

The removal of the requirement to travel for training and for hotel accommodation will have a massive impact on de-carbonisation at a global level. There are approximately 10 million mariners that require mandatory training on a five-year cycle. Current total training costs are largely comprised of travel and logistical costs rather than the actual retail cost of the course. Removing these elements removes millions of plane, taxi and train journeys carbon emissions caused by hotel laundry and heating. This will greatly reduce training costs, which will be massively beneficial to all employing companies and individual delegates, in particular those with the least financial means.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CITY SCIENCE CORPORATION LIMITED	Automated Model Build for Decarbonisation and Climate Resilience	£218,512	£174,810
University of Exeter		£90,751	£90,751

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Our experience developing transport decarbonisation strategies indicates the need for a new generation of easy-to-access, multi-modal models (including freight) to provide the necessary, detailed intelligence to enable local authorities, citizens, advisors, professionals and campaigners to simulate impacts and develop credible, prioritised pathways to net zero.

Our project overcomes this critical challenge and creates a major leap in the availability, access and openness of calibrated transport models across the UK and internationally.

The project also overcomes business challenges resulting from the COVID-19 pandemic, enabling stakeholders and the supply-chain to shift a larger proportion our business to digital channels both nationally and internationally.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AIRSPACE UNLIMITED SCOTLAND LTD	AirOpt - optimisation of airspace to save 2MT CO2 a year	£183,052	£146,442
University of Stirling		£75,560	£75,560

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Airspace Unlimited has been established to innovate in how airspace is shared between military and civil users. Increasingly this is managed through a concept of the 'flexible use of airspace'. The more flexibility that can be achieved, the more we can reduce fuel burn and greenhouse gas emissions.

Our aim is to reduce aviation greenhouse gas emissions through a daily 'big data' optimisation of multiple flight trajectories and multiple military airspace reservations. This will enable airlines to optimise their routes on a daily basis, potentially saving 2Mt of CO<sub>2</sub> a year in Europe. We have already developed a tool to do this, 'AirOpt', which was funded by a DfT T-TRIG grant, and have been working with the University of Stirling to improve the computational efficiency.

Throughout most of the world airspace is shared between civil and military users. Airlines fly between airports typically several hundred miles apart, whereas the military conduct training exercises in predominantly fixed airspace volumes that are close to military airfields. For civil users, the military airspace is something that must be avoided, for obvious safety reasons.

In recent years, civil and military authorities have increasingly worked together to optimise the use of the airspace, under the principles of the 'Flexible Use of Airspace' (FUA), which is defined as strategic, pre-tactical and tactical. Tactical denotes the day of operation, pre-tactical up to three days before while strategic is anything more than that. Military airspace use is generally determined at the pre-tactical level so that airlines can subsequently flight-plan with knowledge of what airspace is available. The processes that support this system are currently being modernised, with the adoption of digital tools and electronic communication. This modernisation presents an opportunity to introduce data analytics and gain small but significant improvements in fuel consumption.

Eurocontrol (Sep 2019) estimates that air traffic management can influence ~6% of aviation emissions in Europe and improvements are underway: 'Free route airspace', which has saved 2.6Mt CO<sub>2</sub> over 5 years (2014-19); and 'Continuous climb and descent' operations, estimated to save 1.1Mt CO<sub>2</sub> per year. Conservatively, our concept has the prospect to reduce aviation fuel burn by 1%, equivalent to 2Mt CO<sub>2</sub> per year across Europe.

Not only do these gains add value in their own right, they act as multipliers for decarbonisation. This is because operational improvements are very low cost compared to the costs of carbon capture (~€24 per tCO<sub>2</sub>) and Synthetic Aviation Fuels (~€120 per tCO<sub>2</sub>). Sustainable aviation fuels will not solve the problem before 2050, therefore near term operational improvements are essential over the next 30-50 years.

In 2019 we commercialised the work and vested our IP in 'Airspace Unlimited Scotland' Ltd. With this 'static' model we are now embedded in two projects in the Middle East and have three commercial proposals in our pipeline. We have been operating in stealth mode since our developments began in 2018 under a DfT T-TRIG project. We are about to submit a patent application.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
H.P.M. LIMITED	Innovative Self-Sterilisation Desiccant Masks (SterilMask)	£90,617	£72,494
KMD COMPANY LIMITED		£59,726	£47,781
PHASE CHANGE MATERIAL PRODUCTS LTD		£70,389	£56,311
PLASNET LIMITED		£61,910	£49,528
University of Nottingham		£119,727	£119,727

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Transmission of COVID-19 occurs through direct, indirect, or close contact with infected people through infected secretions or their respiratory droplets. This can be limited with face masks. Face coverings are now recommended where appropriate social distancing could be difficult to maintain. The protection of frontline health workers is paramount and personal protective equipment (PPE) must be prioritized. However, large numbers of healthcare workers have been infected or lost their lives in spite of using PPEs. Moreover, there is a global shortage of PPE for medical settings, including face masks. Commonly used disposable medical surgical mask and FFP3/N95 mask provide some protection against COVID-19 but are not very effective in high virus concentrations and need to be replaced after each use to avoid contamination.

To address the scarcity of face mask, different approaches have been conceived to disinfect, clean, and sterilise the disposal masks. Since a mask can contain respiratory secretions on both the inside and outside, it is important to effectively decontaminate the mask before reusing it. There are processes in hospitals for cleaning masks, but typically they are time-consuming, involving different types of gases and special machines. Disposable masks are made from non-woven fabrics; FFP3/N95 masks cannot be safely cleaned for reuse since exposure to excessive amounts of water and cleaning products destroys the fibres and damages the carbon filtration systems. Optimum practices for effectively decontaminating masks are still being researched, yet preliminary evidence finds traces of the coronavirus persisted for considerable time on masks, which indicates that continuous sterilisation of face masks is essential for better protection, especially for healthcare facilities.

In this project, a self-sterilising desiccant mask, 'SterilMask' is proposed, which uses highly efficient desiccant material (salts) for continuous sterilisation without damaging the mask's filtration capability and breathability. Instead of using disinfecting materials or additional equipment/tools, SterilMask provides self-sterilisation properties to efficiently decontaminate the mask where the desiccant material kills/deactivates viruses on the mask skin and in the inhaled air. The desiccant material can be encapsulated with porous membrane fabrics to form into a mask. Alternatively, a desiccant sheet made of an impregnated desiccant material onto a membrane sheet layered with a fabric sheet can be used as a mask. Another option is to use the membrane sheet as a cover for SterilMask made from recyclable plastics. The desiccant can humidify inhaled air passing into the nose and sinus cavities, reducing the moisture level/minimising condensation, providing better comfort for wearers. SterilMask can provide long-lasting sterilisation effect. Furthermore, regeneration of the desiccant material/sheet is not needed because the difference in the humidity levels between the inhaled and exhaled air could contribute to the self-balanced performance. An additional filter can be incorporated to SterilMask to enhance breathability, and provide improved comfort for long-period wearers, such as healthcare workers and factory workers.

The advanced and affordable SterilMask will provide safety and enhanced breathing experience, and durability, recyclability, and reusability features. The use of SterilMask would significantly reduce the waste of millions of disposed single-use masks.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Shout Business Technologies Ltd	Shared outcome prototype technology for the music industry	£218,706	£174,965

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

SHOUT4 is an online deal management software in the creative industries, featuring the sharing of outcomes. The value of a shared outcome deal is its ability to secure the best teams to work on projects while de-risking the upfront capital costs. It is a system with a truly democratised outcome. This innovative model offers a real opportunity to reshape how deals are made in the post Covid-19 world. Shout4 have already proved an analogue version of the economic and legal model within the music industry. Artists and labels have been able to create new product for onward sale for as little as 10% of traditional costs. Professionals and other service providers have accepted a significant reduction in their normal upfront fees in return for a share or wider share of future revenues generated by that content and or artist.

This project will develop and extend SHOUT4 software to create the most appropriate form of reporting to provide transparency, laying the foundations for a full treasury system. Although initial focus will be on music, supporting the development and marketing of artists and labels, the software is being developed as sector agnostic with wide applicability in the longer term.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PILIO LIMITED	Nature Positive Fashion Supply Chain Management	£218,724	£174,979

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has caused reduced consumer demand for fashion, leading to a reduction in demand for raw materials such as cotton and wool. The dramatic decline in sales has resulted in prolonged fragility and tension in the British fashion industry's supply chains. COVID-19 has halted the progressive sustainability agenda in the British fashion industry, which was making substantial progress in greening their supply chain. Due to budget cuts and furloughs, sustainability has been sidelined. This market disruption offers a unique window of opportunity to improve supply chain transparency and secure a resilient long-term supply of critical raw materials for the longevity of the British fashion sector.

Nature-based solutions are strategies to protect, restore and improve the management of natural and agricultural lands, with the potential to mitigate up to 11 GtCO<sub>2</sub>e yr<sup>-1</sup> emissions cost effectively (? \$100 MgCO<sub>2</sub>e<sup>-1</sup>) (Griscom et al., 2017). In most cases, nature-based solutions also provide positive ecological, social, and economic returns (Dasgupta et al., 2020; Seddon et al., 2019). Pilio will enable the fashion/textiles industry to incorporate sustainability into normal, commercially critical business activities such as long-term supplier relationships and consistency of supply.

Our innovation is novel in that it will enable fashion companies to take a holistic and systems approach, by creating an instrument for them to both reduce their carbon footprint and improve the socio-ecological resilience of the lands they depend on for raw materials. By the end of this project, we will pilot a SaaS platform that enables the fashion/textile industry to transition to a net zero carbon and nature positive supply chain.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACTION ARTIFICIAL INTELLIGENCE LIMITED	Boosting SME Survival Rate by enabling convenient and accessible Cash Flow Management via Artificially Intelligent Virtual Assistants.	£305,670	£174,232
RGS ACCOUNTANTS LIMITED		£26,959	£21,567

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has placed tremendous strain on many SMEs' finances. Falling demand has threatened commercial viability, especially for businesses with low cash reserves or unstable cash flows. 80% of SME failures are a result of cash flow problems. Deloitte's report 'COVID-19: Managing Cash Flow' (2020) highlighted the centrality of effective cash flow management to businesses' chances of surviving the pandemic.

This project aims to provide a tool that makes it easy and quick for non-experts to understand and better manage their company's cash flow. The technology proposed makes cash flow management simpler, quicker, and more accessible for all SMEs. This will be achieved by building an artificially intelligent Virtual Assistant (VA) that is permanently on call for users via text or voice interfaces. Business owners can access the VA to interrogate their cash flow positions using normal, conversational language through a range of channels including instant messenger, Webchat, or via the phone using automatic speech recognition. Open banking integration will help pull information into one place. Market distribution will be via partnerships with existing suppliers of services to SMEs.

The objective is to save thousands of UK businesses over a five-year period; this will be achieved by reducing the failure rates of the SMEs using the proposed service.

The VA bypasses the need to use financial terminology because users can express themselves naturally. For example, a business owner may say: "I reckon a third of my clients are slow paying. Who are they and how long are they taking on average, and can you tell me what I'm owed?". Responses will be immediate, providing up-to-date information from both bank accounts and accounting packages - all presented back to users in everyday natural language. Business owners and managers can then take action or request more detail.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SOLAR OPTIONS FOR SCHOOLS LIMITED	Education app for students to engage in independent, project-based learning towards decarbonising their schools	£198,976	£159,181

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The key objectives of the Solar Options for Schools Ltd project are:

- \* To develop and test an innovative Education for Sustainable Development (ESD) learning mobile App, which will be using geo-functions on mobile phones to provide contextual/experiential learning, to encourage pupils to take learning 'journeys' about energy and sustainability and ultimately inspire a solar project at their school. This will deliver the Learn-Act-Share, place- and project-based ESD experience that does not exist in a digital form.
- \* To assess the extent to which use of the App can change behaviours to lower carbon emissions.
- \* To assess the extent to which our solar project development costs are reduced due to the App empowering students to take the first steps in developing a solar project, resulting in solar power becoming more accessible to schools, even those in the north where light levels are less than in the south.

Solar Options for Schools Ltd will create and test a prototype of the App that is innovative by making ESD learning personalised, contextualised and digitised. Through its ability to deliver ESD, the App which will be on a mobile (rather than learning delivered by a computer or tablet) will give more disadvantaged children equal-access learning and skills and could help quicken the transition to a net zero carbon society by continuing to educate and inspire the next generation to live more sustainably at a time when face-to-face ESD is not possible.

If ESD learning falters due to the pandemic, the education of many young people may also falter and decarbonisation will become even more difficult; another generation will not learn skills aimed at sustainable cohabitation. Transitioning to a net zero carbon society will take even longer. This experimental development project introduces a completely new approach to ESD, while responding to the limitations (and opportunities) that the COVID-19 pandemic has presented.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ANANAS ANAM UK LIMITED	Sustainable alternatives for COVID-19 PPE: biodegradable wipes and reusable mask made of pineapple leaf fibre	£213,875	£171,100
University of the Arts London		£35,735	£35,735

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The COVID-19 pandemic has affected our way of living in many ways. It affects not only mainly our health but also has a huge impact in the optimum performance of our health system. It is important to look for possibilities that can decrease the spread of the virus and help to live in a safer environment. The existing used PPE with the aim of protecting the society are mainly made from non-degradable either recyclable single use plastics or microplastics. Without a clear route recycle the existing PPE. This fact will cause a huge waste impact with increased pressures is going to sum up to the actual environmental problem and derived climate change. "At the current rate we are putting a 129 billion face masks and 65 billion plastic gloves into the environment every single month." Laurent Lombard and most of it is ending in the ocean, adding up to the plastic waste problem. A biodegradable, non-toxic alternative is urgently needed to substitute the existing PPE without compromising the performance.

In this project we suggest the use of Pineapple leaf fibres to be used to produce biodegradable hygienic wipes and reusable masks. This would help to fulfil our need for PPE whilst relieving pressure on an already overloaded environment, with a positive climate-friendly alternative. In other words, decrease the spreading of the virus in a more sustainable way to decrease the impact of the pandemic also in climate change and keep our oceans clean.

Due to the imminent EU regulation related to the ban of using single use plastic products, the search for use of recoverable natural fibres to replace the existing synthetic fibres is widespread, Ananas Anam has already started positioning pineapple leaf fibres as suitable alternative with good response from the market. However, this potential market also requires the fibres to be microbiologically safe, which can be achieved with pineapple leaf fibre by adding a new step to the existing production line. This would give Ananas Anam the opportunity to grow in these markets through providing a more sustainable fibre and yarn to the market.

The viability of the use of pineapple leaf fibres in the development of hygienic wipes has already been proven with established great interest from the market.

In order to achieve this, it is necessary to enhance the supply chain with an additional step to assure the final quality of the fibres. This project will be based on the exploring and incorporation of a sterilisation step to the production line, that needs to be sustainable, scalable and do not affect the existing other fibre properties.

In addition, after being sterilised, the fibres can be used as a source for yarn, that can be converted into a knitted mask using 3D knitting technology, designed to reduce waste.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
REALITY CHECK PRODUCTIONS LTD	The Round	£216,586	£173,269
CONDENSE REALITY LTD		£104,964	£83,971
Rose Bruford College		£124,057	£99,246
SPIRIT LIGHTING LIMITED		£49,975	£39,980

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The Round is an innovative new platform for professional artists and creatives to produce, build and distribute performances delivered live to audiences' homes globally. Utilising real-time remote motion-capture and operating technology and virtual creation tools, The Round will bring audiences and their friends closer to live theatre than ever before in a social, interactive virtual theatre at home. The Round is created by Reality Check Productions, with the support of location-based Mixed Reality experts Figment Productions and in partnership with Rose Bruford College of Theatre and Performance, motion capture experts Target3D and volumetric capture experts Condense Reality.

Created especially for the platform, productions in The Round use Mixed Reality technology to allow audiences to watch new live shows, with their friends, from any viewpoint. Following the prototype build of The Round, funded by Innovate UK's COVID response grant, the next phase of development will bring The Round to Alpha deployment, with the support of Figment Productions, through to Beta launch and on to the first public release in June 2021\.

During the current public health crisis, it is vital that we continue to create innovative and exciting new theatrical work for audiences at home, while at the same time supporting those industries so badly affected by the impact of global disruption. With no clear indication of the easing of social distancing measures in the UK's world-leading indoor theatre venues, The Round will deliver a means for the immediate distribution of live performance that is future-proof and adaptable to the needs of the industry and the demands of audiences. In the long-term, we hope The Round will contribute to the development of a new hybrid immersive entertainment medium for at-home and in-location live performance, created by British SMEs, with global export potential to international markets.

The Round will further contribute to the theatre industry's continued growth by mitigating its environmental impact through reducing the need for international travel, physical waste from set construction and energy consumption from performance. The platform will increase accessibility for audiences across the country, particularly those unable to travel, improving resilience for the theatre industry for any future disruption.

Furthermore, the innovative theatre visualisation and remote collaboration tools developed for The Round will reduce the cost of theatrical R&D, enabling more experimentation, artistic risk-taking and greater, hyper-specific audience analysis for risk mitigation in the costly process of theatrical pre-production. As a result, we hope for The Round to become a go-to destination for experimental live performance content that directly reduces the likelihood of failure in the commercial theatre industry and drives greater returns on investment and consequent growth in the industry.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BERRY GARDENS GROWERS LIMITED	Building the next generation blueberry harvester	£161,888	£129,510
Lutton Farm Partnership		£29,587	£23,670
University of Lincoln		£80,780	£80,780

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 is creating an existential and widely publicised threat to the otherwise vibrant UK soft fruit sector. The lockdown in March limited access to labour and the UK government launched the Pick for Britain campaign to support the sector as a contingency. However, despite this picking costs have increased, due to the need to train the workforce and some farms have left crops unpicked. Some farms have reported high incidences of COVID-19 outbreaks amongst pickers. There is, therefore, an urgent need to drive labour productivity through automation.

This project's objective is to develop and demonstrate a fully automatic blueberry harvesting machine, one of the UK's most important soft fruit crops. The proposed machine is developed from a prior IUK feasibility study (IUK11295). The project will construct a full-scale working machine, including full CAD designs and designed for onward manufacturing. It will be fully electric and include new image analysis systems to optimise crop quality at harvest. The machine removes berries from the bush by the use of innovative shaking systems and can fit inside the small greenhouses and polythene tunnels used by all UK and many EU blueberry producers. Following this project we will have a fully designed machine, which can then be manufactured at scale for widescale deployment by UK growers in the 2021\.

This application creates new business opportunities in farm automation but also underpins the economic and environmental sustainability of the soft fruit sector. The industry domain scale is significant; blueberries are now the second largest soft fruit sold in the UK (£337m p.a.). The UK industry has been expanding to meet demand but even so we only have a 7% share of this market. Blueberries are well adapted to the UK summer climate and there is considerable opportunity to grow the UK share. However, the crop requires large amounts of typically migrant labour to pick the fruit, which represents c.40% of production costs. Driving labour productivity in the sector is crucial for a COVID response but also underpins longer term productivity. A more productive UK production base secures environmental sustainability, simply because there will be a reduced requirement to import fruit from overseas producers.

The project will be delivered by a well established consortium led by Berry Garden Growers, the UK's largest grower-owned co-operative of soft fruit. In addition the machine will be tested by Luton Farms, a member of Berry Gardens and the UK's largest grower of blueberries.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ROVCO LIMITED	Reducing the Impact of Social distancing To Offshore Renewable Energy (RISTORE)	£209,525	£167,620

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The offshore wind energy sector has been significantly impacted by COVID-19, primarily due to the implementation of social distancing regulations and their effect on staff on vessels. Offshore inspection, both for survey where new windfarms are to be installed, and for regular maintenance of existing infrastructure, have been affected by project delays and increased costs to businesses working in the sector. RISTORE will optimize the subsea inspection of offshore renewable energy assets with an intelligent data-oriented approach. RISTORE will reduce the human presence requirement on site by deploying a system based on state-of-the-art computer vision and machine learning on the edge, and the infrastructure to allow two-way communications with remote operators and analysts.

The system will have benefits in several areas:

- \* Environmental: by reducing the numbers of personnel required offshore, vessels used can be smaller and increased survey efficiency will reduce the time required at sea. This will have the effect of less fuel consumption reducing the direct environmental impact and the cost to the wind energy sector.
- \* Cognitive load for operators: surveying tasks can be cognitively demanding and tedious. By employing machine learning, operators will be able to leverage an automated tool for inspection, increasing the efficiency and accuracy of surveys.
- \* Increasing diversity and accessibility to the sector: by enabling onshore survey analysis and decision making, many of the barriers and restrictions to working in the sector are removed.
- \* Sectoral resilience to COVID-19: Current restrictions now require lengthy quarantine periods and testing pre-deployment. Removing the requirement for many personnel to deploy offshore enables operations to continue whilst complying with social distancing / social bubble regulations.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PHOTOGRAM LTD	Alice Camera™: An AI camera made for content creators	£218,695	£174,956

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Photogram Ltd is a computational photography startup specialising in AI-accelerated hardware and software for modern content creation. Our project crosses the boundaries between deep tech and the creative industries with a vision to empower creatives with the necessary, open, and modern technology to enhance their art form. We are at the intersection of computer vision, artificial intelligence, IoT, as well as creativity, photography, and consumer goods.

Our solution is The Alice Camera(TM) a novel AI camera built for content creators and modern photography. A disruptive product because it reimagines the camera developed as a computer, featuring an interchangeable lens system, professional-quality imaging sensor and cutting-edge AI-accelerated hardware and software to process the latest computational photography features. Imagine having one device that gives you the best elements of a DSLR, mirrorless camera, and smartphone.

The photographic art form is in the midst of an existential crisis, similar in scale to when digital replaced film. Camera makers and photographers alike have assumed that the best way to make cameras better is with faster glass, bigger sensors, and complex mechanical solutions; leading to increased weight, difficulty of use, and costs. However, smartphones can now control their low-quality optical systems to produce images with much better quality than they should be capable of producing. A smartphone's most important aspects are now its computational power, the algorithms running on its processors, and the size and quality of the datasets used to train those algorithms. Currently, there is no end-to-end solution like ours in the market for professionals, with the closest related products delivering disconnected elements of the shoot-to-share workflow.

Photogram AI was founded in July 2019 on Entrepreneur First, a deep tech accelerator in London. The company is incubated at the UCL Innovation & Enterprise university incubator in King's Cross, London. Since founding, Photogram has built strong relationships with other prestigious institutions and partners to help research, develop, and market the vision of the Alice Camera(TM) to their customers. The company joined the Digital Catapult Machine Intelligence Garage and 5G accelerator programmes, the British government's innovation hub, and NVIDIA's accelerator for AI start-ups revolutionizing industries winning a total of £200,000 of cloud computing credits and support to train, run and deploy their proprietary AI models and test IoT hardware. Additionally, Photogram is working with Additive Flow, an Innovate UK backed startup, as their sustainability and materials engineering consulting partner; Aetha Design, an ex-Dyson run agency, as their product and industrial design consulting partner; Mettle Studios, as their app and software engineering consulting partner; SMS electronics, one of Britain's largest and oldest contract manufacturer, as their manufacturing supplier, and London & Partners, the Mayor of London's PR agency, as their business growth advisers.

The project will seek to demonstrate substantial countrywide efficiencies can be created in the consumer electronics value chain, through faster deployment of technology to customers using UK manufacturing. It will underline our/Britain's reputation at the forefront of AI-enabled creative technologies, and provide us opportunities to export.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BETTER LEMON CONSULTING LIMITED	A sustainable future for hospitality through inclusive digital mentoring	£262,350	£173,151

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The hospitality industry in the UK and around the globe has been devastated by Covid-19 and faces years of reduced demand caused by the immediate pandemic as well as sustained moves to digital working and reduced levels of travel directly resulting from it.

Hospitality businesses can only survive the pandemic by adapting and finding new sources of revenues, significantly cutting costs and improving sustainability and efficiency, and our innovation is aimed at the recovery of hospitality and travel, with a focus on environmental sustainability.

Mentoring - the exchange of experience and development of ideas - should play a leading role. The technology and solutions to support the hospitality recovery already exist, but require access to a leader's experience, or new technologies and the vast majority of the workforce in the UK largely lacks these skills today, as experiences cannot be easily shared, and training cannot easily be accessed.

The Growth Works Network is a fully digital mentoring network open to every hospitality professional in the UK and globally, a new innovative platform for accommodation providers, hospitality technology companies and universities. The community comes together to learn, network, share ideas and develop solutions to the crisis, wherever they are based, helping the UK hospitality industry take a lead on the global innovation opportunities in the travel industry.

The project will have at its core a focus on efficient and sustainable recovery from the crisis, both reducing costs for hotels while improving their environmental sustainability and improving their effect on the climate. Discussions focus on 'sustainable competencies', those areas of the business where resources can be saved and waste carefully managed - from paperwork; energy; water, and further areas, as well as understanding where technology can best be applied.

The solution exists today as a service, and is popular with users and organisations in trial. This project will convert this service into an improved, innovative online platform. We adapted our hotel consulting business in March, in the face of a fall in demand for our services, to respond to the crisis and set up The Growth Works Network. Our community of 100+ hoteliers discuss sustainable solutions, but the offering requires human management and support, slowing growth and making pricing less accessible. The next phase of growth, to access the addressable market of 3.2m hospitality workers in the UK, plus 100s of universities with hospitality students and alumni & hotel chains, is to develop an online platform where mentees and mentors come together, exchange and develop sustainable solutions for the COVID-19 recovery.

The community is open to everyone and fully inclusive, regardless of education and experience level, or nationality and background. We maintain this equality by remaining free to individuals to receive mentorship, and charging only larger institutions like universities and hotel companies.

All this is done with no physical travel, reducing the environmental impact - connecting hotel professionals across the UK and around the world with leaders with field experience, and businesses that are at the cutting edge of sustainable hospitality innovation.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PHION THERAPEUTICS LTD	Automated Production of RALA/Nucleic Acid Nanoparticles from Bench to Patient Dose	£174,610	£139,688
CENTRE FOR PROCESS INNOVATION LIMITED		£65,475	£65,475
REACH REGULATORY LTD		£70,134	£56,107

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

RNAi therapeutics have the potential to transform healthcare interventions as evidenced by the approval of 2 products in the last 2 years for life threatening diseases. RNAi therapy is designed to transiently reduce a defective gene for therapeutic purposes. It is a rapidly growing market with 109 RNAi based therapeutics in clinical trials (July 2018) [Wu X. and Turnbull A.P. 2018]. However, there are still issues that surround the RNAi therapeutics which include getting to the appropriate tissue and then ensuring intracellular delivery to the destination site. Recent studies have also indicated that those with underlying health conditions such as diabetes, high-blood pressure or smokers have an increased number of ACE-2 receptors in the lung epithelium [Leung J.M, 2020]. Studies have revealed that COVID-19 uses the ACE-2 receptor to enter cells in order to produce more viral particles that can infect more ACE-2 receptor positive cells [Kuba K. 2005]. The ACE-2 receptor plays a role for many biological functions but if expression could be lowered for a short period of time it could reduce the infectivity of the virus and help tip the balance towards healthy recovery. RNAi could be used to transiently reduce expression of this ACE-2 receptor but only if there is an appropriate delivery system. pHion (Belfast SME) have developed a solution for RNAi delivery that is safe, does not further exacerbate the immune system, preferentially delivers the therapeutic to the lung and is cost-effective, ultimately enabling widespread adoption of the RNAi therapy. The innovation centres around the use of a peptide termed RALA that is designed to condense RNAi into nanoparticles (NPs) that have the properties necessary to cross cell membranes, escape endosomes delivering the cargo to the cytoplasm with high efficiency. The NPs formed between the RNAi which is designed to reduce ACE-2 expression and the RALA peptide NPs do not require cold chain storage and can be stored for many months without losing functionality. However, we do not as yet have a methodology in place to support the large-scale production of these NPs. Indeed, for the nucleic acid industry, one of the greatest hurdles will be the manufacture of novel therapeutics. Therefore with clear alignment to the specific theme of challenges as a result of COVID-19, this project is designed to accelerate and optimise the scale-up of the RALA/RNAi therapeutic to patient doses in order to be 'future ready'. The proposed 9 month project is designed to develop the optimal conditions for the automated production of functional NPs using microfluidics that can be readily transferred to clinical doses. We will also develop the optimal lyophilisation process to ensure a highly stable functional product. Finally, with regulatory framework in place and proof that we can transfer our process externally to scale up to clinical doses, we will be well positioned to take this therapy to the clinic and to position RALA as the go-to delivery system for RNAi therapeutics to the lung.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NPCOMPLETE LTD	BUBBLES: Real Time Home Care Scheduling tool limiting (COVID-19) Infection Chains	£200,280	£160,224
CARE CITY INNOVATION C.I.C.		£159,918	£127,934
University College London		£15,184	£15,184

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Home healthcare and home care are expected to see increased demand, as more elderly patients and those with underlying health conditions stay home to lessen their risk of exposure to COVID-19. Cutting down on contact with others remains the most assured safeguard for minimising risk of exposure to COVID-19 and the consequences of infection. Our solution aims to improve existing technology as well as adding novel features allowing for more safety (safe bubbles) and flexibility (real-time allocation).

Home health care scheduling and routing problems are notoriously hard to solve. They involve the assignment of caregivers to residencies to perform tasks that require specific skills within a predefined time frame. They are multi-period in nature, very large-scale, and they exhibit some very unique features, such as regional assignment restrictions, compliance with skill levels and other service qualifications, hard or soft synchronisation and priority constraints, multiple start and end locations (e.g., start from medical centre and return home at the end of the shift), different rules and targets for in-house and contracting employees, multiple transportation modes, multiple service time windows, deadlines, complex cost functions for outsourcing, reimbursement or overtime, hours of service regulations (e.g., max duty times and break requirements) multiple shifts per day, and other operational realities.

Taking into account the challenges resulting from the COVID-19 pandemic, our solution will reduce infection risks associated with multiple care contacts, improve efficiency of staff, and optimise routes to minimize travel time and distance (thus lowering the environmental burden). This is in line with advice by the UK Government and NHS England on home health care which promotes segmenting patients into cohorts based on their risk of exposure to the virus. In addition it recommends segmenting staff into groups each dealing with a specific patient cohort and accounting for staff risks relating to the virus.

Lastly, the proposed solution considers that there may be unexpected changes that disrupt the established service plan. Using our state-of-the-art staff scheduling technologies our solution is able to readjust the schedules in real-time.

In summary, the tool will deliver the following benefits:

1. Safe Bubbles - Reduced infection risk by restricting exposure due to contained staff and patient groups. allocate care workers in such a way that minimizes the size of potential infection chains, by forming contained "care bubbles".
2. Increased flexibility and adaptability- Our solution allows for effective real-time scheduling to a) minimize the total required time of (often manual) rescheduling, and b) relieve inefficiency caused by unexpected events leading to delayed or low-quality service.
3. Elevated capacity in the system -- State-of-the art optimisation to improve scheduling efficiencies within home care teams, increasing satisfaction and capacity for more patients to be supported.
4. Smarter staff distribution -- Explicitly matching staff skills and preferences to patient need, ensuring staff focus contact time where their skills are needed most (including remote contacts where appropriate).
5. Environmental benefits - Lowering emissions from both unnecessary (where remote consultation can suffice) and inefficient car journeys, and reducing the need for patients to go to health services.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DEEP RENDER LTD	AI-based Image and Video Compression on Mobile Neural Accelerators	£231,914	£173,936
Imperial College London		£98,856	£98,856

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Deep Render is a research-led startup founded by Imperial College graduates from the Department of Computing. We are a London based AI start-up that is developing the next generation of media compression algorithms. Our proprietary and patented technology is at the forefront of machine learning research, and our Biological Compression has already leapfrogged the best previous compression standards by up to 80% better efficiency. Additionally, while the traditional compression methods have hit peak-innovation with significantly declining performance gains over the past decades, Biological Compression is only starting to realise its full potential.

As global data consumption is growing exponentially with more than four out of five bits of global internet traffic being image and video related, Deep Render's AI-based compression technology is vital to counteract upcoming broadband constraints. The outbreak of COVID-19 has accelerated this problematic trend even further, as a result of the crisis, internet usage has increased significantly. In particular, the demand for streaming, video-on-demand and remote-working tools has skyrocketed. The exponential increasing bandwidth demand creates a massive challenge, as seen by the EU's request asking big-tech companies to lower streaming resolutions to safeguard our communications infrastructure. Better compression technology is urgently needed to stop this problem from snowballing. Jeff Hecht states in Nature.com "Researchers are scrambling to repair and expand data pipes worldwide to keep the information revolution from grinding to a halt".

This project is about implementing Deep Render's prior compression research on consumer products so that the average person can benefit from smaller file sizes, and consequently, higher bandwidth supply. Precisely, we aim to execute our software on neural accelerator chipsets of an iPhone 12 and a Galaxy S20. The challenge is the performance-optimisation of our computational-hungry algorithm (neural networks) and to make it runnable in real-time on mobile platforms without loss of our superior compression efficiency. This task requires in-depth knowledge of mobile chipsets, as well as low-level software optimisation and engineering capability.

To accomplish our goal, we propose a collaboration with Professor Paul Kelly from Imperial College London. Paul Kelly is a Professor of Software Technology, he is the lead for the Software Performance Optimisation Group, and he has a close affiliation to Imperial's Artificial Intelligence Network. We aim at leveraging his extraordinary expertise in high-performance software implementation and his prior research in low-level neural network optimisation to reach sub-16.6ms decoding times for 4K video on and iPhone 12 and Galaxy S20 device. Professor Kelly sits on the Advisory Board of Deep Render since June 2018 and has an excellent understanding of Deep Render's technology, and a great working relationship with its founders.

Our value proposition is easy to understand. By making file sizes 80% smaller, we increase the bandwidth supply of the internet by a factor of up to 5. Deep Render is going to help create a new age in which bandwidth constraints are a problem of the past. As a result of COVID-19, solving this problem has gained more importance, and Deep Render is determined to create a fast solution.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
REPLY LIMITED	HEALTHCRED - application for further funding regarding Health Credentials for Covid-19 infection	£218,315	£174,652

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Impact of the Covid business disruption will be felt by organisations for years to come. Particularly hard hit were industries considered non-essential and those operating high-contact settings, such as sports, tourism, arts and entertainment. However these industries make up the bulk of the UK economy and contribute hundreds of billions to GDP. While re-opening of businesses has begun to take place, these industries are not able to recover sustainably, while those like restaurants are not able to operate at full capacity, and therefore are not commercially viable or sustainable.

Re-opening of businesses has been conditioned with obligations to mitigate the risk of generating new clusters of the Covid infections for restaurants, bars and larger social places like stadiums and airports. In addition, following recent government advice, venues newly reopened venues are obligated to collect customer information, including personal data, which they may end up doing with a low level of security. Existing digital solutions are centralised honeypots of citizen data which are susceptible to cybersecurity breaches and fraud.

We have developed the HEALTHCRED solution, which enables businesses to mitigate risk of spurring new Covid infections, and enabling them to reopen at full capacity. HEALTHCRED presents Covid test information as well as self reported symptom, temperature and contact/travel check all in one simple QR code that can be read by the regulatory personnel at the venue, event or organisation. Our solution has been developed with the B2B customer in mind, and supports businesses in their reopening strategies by mitigating health risk concerns. It further aligns with the newly developed ISO travel risk standard for hotels and we have proven the concept of being able to integrate it, by piloting an integration with a large commercial Telecoms operator.

This project will enable us to expand the development of our technology by layering on additional encryption methodology, integrating with a commercial retail partner for validating the technology, and integrating the upload of Covid test results in a live setting. Reply Ltd is the UK entity of the wider Reply Group, who have a global reach and a developer and support community to ensure that the application can be deployed effectively at commercial scale. It will take 6 months of rapid development, testing and validation, and will include a public opinion study for use of the application.

The resulting solution is multi-purpose, and can serve a wide cross-section of industries to help businesses sustainably recover their customer bases and revenues in a safe and effective manner that wouldn't roll back existing efforts of the NHS and governments to control the virus, but rather enhance the efforts to support the NHS and save lives while simultaneously supporting economic stability for citizens. The application maintains citizen data security, prevents fraud and decreases risk of discrimination. HEALTHCRED is adaptable to future scenarios of outbreaks, other epidemics or pandemics, and other use cases where digital health credentialing plays an important role, for example travel vaccinations, blood and organ donations, and transplant scenarios.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SPACE REPUBLIC LIMITED	COVID-Secure Office Pod & Workspaces Project	£215,296	£172,237
Brunel University London		£75,368	£75,368

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Since launching in 2018, Space Republic has developed and brought to market a tech-enabled office pod to support remote working in public spaces, followed by a pod aimed at the office market (QULO) in Q4 2019\.

COVID-19 has created a direct challenge to businesses and individuals, due to the risk of transmission in shared workspaces and office pods. To address this challenge, Space Republic has partnered with Brunel University to design, develop and test an office pod with automated decontamination technology.

The new office pod will be the first of its kind, representing a significant innovation in the market. Project outputs will include a full working prototype with automated decontamination solution - performance tested to verify the COVID-19 kill rate, certified and ready to take to market.

As part of the project, we will deploy the office pods at a pilot workspace in the UK to facilitate user testing and development of an operational playbook.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GENCOA LIMITED	Optically enhanced antiviral transparent screen protection	£103,195	£82,556
DIAMOND COATINGS LIMITED		£116,430	£93,144
University of Liverpool		£60,009	£60,009

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Society requires new solutions to reduce the probability of COVID-19 cross-infection as people resume their daily lives. However, common touch surfaces have been shown to contain significant viral and microbial contamination. The SARS-CoV-2 virus can be present on plastic and glass surfaces for several days and multiple users of the same touch surfaces creates a continuous biological load that leads to cross-contamination, despite periodic cleaning.

A new form of transparent coating has been developed using vacuum coating that is extremely biocidal and will be combined with anti-reflection characteristics. These new anti-reflective, anti-viral coatings will be tested for two applications. The first application is to utilise these coatings for reusable face visors and goggles to afford clear vision with continuous self-cleaning effect and reduce skin irritation from chemical cleaning. The second application will test the coating on ticket machines used widely in transport and thus break chains of transmission arising from numerous people touching the same surface.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LOOWATT LTD	SOS (Sustainable toilets for Open Spaces)	£216,291	£173,033
TECHNOPLAS LTD.		£103,705	£82,964

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

**\*\*Project Vision\*\*** - The need for social distancing to address COVID-19, human need for exercise and social distancing requires people to spend increased time in open public spaces eg parks, beaches. However, public toilet facilities (PTFs) are scarce and have been closed due to COVID-19. This has forced some people in the UK and globally to defecate publically (Royal Parks, 2020). Councils are now struggling to re-open PTFs.

This project will allow Loowatt, a sustainable toilet developer and Technoplas, an innovative sustainable packaging manufacturer, to collaborate and address this urgent need.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EVERYCLOUD SECURITY LIMITED	Cloud Cost Management	£203,029	£162,423

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

EveryCloudX was founded by Keith Purves, Khalid Mohamed, Paul Richards, Rob Mukherjee, and Silvia Tomlinson. Currently, 20% of enterprises have stated that their annual spending exceeds \$12M, while 74% reported that their cloud spending exceeds \$1.2M annually (Flexera). The average organisation currently has over 1200 cloud applications, and only uses roughly 60% of such applications (Frost). This results in unnecessary spending and increased carbon emissions from data centres, which account for 2% of global electricity use. The COVID-19 pandemic will further exacerbate the challenge of unmanaged cloud applications. EveryCloud will enable companies to reduce energy consumption on unused applications. It will be Europe's first scalable, fully automated solution to create a single system of records for cloud applications.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACUFIREUK LTD	Covid Safe & Energy Efficient Ventilation	£122,170	£97,736
LIGHTFI LIMITED		£111,530	£89,224
SRS WORKS LIMITED		£93,275	£74,620

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has put energy efficiency and decarbonisation in ventilation systems on hold, through government guidelines suggesting taking carbon and energy penalties to deliver safe and clean air for occupants. This has caused a significant impact on sustainability and decarbonisation goals. Furthermore, the industry has taken huge financial and operational hits from COVID-19, leading to a pause on upgrade projects, R&D and efficiency measures. This has had a direct effect on our businesses and many others.

Air Handling Units and related Heating, Ventilation and Air Conditioning (HVAC) systems constitute the largest single cost energy consumer in the building sector at around 33%. With heat making up approx. 50% of the average commercial building carbon emissions. As heat is one of the 3 key pillars to address in achieving net zero the current COVID-19 ventilation guidance presents a significant major impact on long term net zero by 2050 and climate emergency targets.

Thus, it is critical that solutions are found to address this inefficient ventilation problem. Our **\*\*Covid Safe & Energy Efficient Ventilation\*\*** Project is designed to address two main drivers resulting from this situation:

- 1.The need to reopen buildings safely and increasing business productivity; and
- 2.To reduce energy consumption, therefore reduce service charge, and offer a return on investment through energy saving that will pay for itself and help retain tenants or attract new tenants.

We aim to enable this by combining state-of-the-art, energy efficient, dynamic HVAC control measures (developed previously by this team), with state-of-the-art pathogen inhibiting technologies taken from the healthcare industry. We anticipate this approach will produce a product combination not only capable of exceeding the guideline requirements for pandemic and post-pandemic safety but also reducing HVAC costs.

Research is required to combine these technologies, especially in non-medical buildings. Building users also need confidence via sensing and known strategies in order to enable a safe and efficient return to operation.

We have a location defined for our R&D trials with a partner company, who is keen to be an early adopter. This will allow us to assess the technology combinations and their effectiveness. It will also enable research into sensing and control techniques to optimise pathogen control, recirculation and heating loads.

Our team presents an unprecedented group of companies with both the IP and trademarks to operate with the existing HVAC approach. We also have extensive R&D and commercial implementation experience with a proven track record of bringing new technologies to market across the UK, in both HVAC and broader green energy markets.

The UK AHU market is estimated at £17bn per year and has a huge effect on both carbon emission and cost. This represents a huge opportunity to address the inefficient ventilation problem brought about by COVID-19 and support the UK economy in returning to work safely.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Through our current network of clients and partners, we have identified several clients and groups who are interested in becoming early adopters of this approach. This includes large private companies and council bodies.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ONE PLAN LIMITED	OnePlan: The Future of Post-Covid Event Planning. Safety, preparedness and a single source of truth for every stakeholder in the event lifecycle.	£313,702	£172,536

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

- \* The events industry has been shattered from the impact of Covid-19. Theatres, stadia, sporting tournaments, and music festivals are now anxiously cancelling and postponing events due to safety concerns. Theatres across the UK are being forced to shut down due to lack of income and inability to see a way forward with an income generating audience during the Covid-19 pandemic.
- \* There is no centralised, scalable, integrated planning platform to support the site planning and operations of these events. OnePlan is this platform. It will give event planners a set of advanced integrated social distancing tools combined with sharing, collaboration and procurement functionality. It will provide end to end visibility of the event planning process for all stakeholders with a single source of truth. It is a step change in the site planning and operations of events. A major leap in efficiency, collaboration, cost reduction, safety and security.
- \* COVID - 19 has resulted in a surge of interest in OnePlan and we have now engaged 900 events professionals across 40 countries as a result of the release of our prototype social distancing tools, and webinar demonstrations. We conducted surveys across the entire group, holding discussions with key organisational personnel to understand need. As an example we spent 2 days in meetings with the Glastonbury Festival team.
- \* Prior to the Covid-19 pandemic we conducted 12 months of in depth industrial research across our full spectrum of potential customers. Using a MVP version of OnePlan we have been working closely with the International Olympic Committee, FIFA, Glastonbury, INTERPOL, Great North Run, IRONMAN, Chicago Marathon and many less well known agencies, and events. We have in total engaged over 600 event professionals to understand their needs, wants and problems. They have made the demand for OnePlan clear.
- \* The Covid -19 pandemic has allowed us to create social distancing tools, which would enable venues to control their audience flow alongside our standard security and safety tools. This has also highlighted the appetite for a centralised planning platform like OnePlan where all stakeholders can see up to the moment planning for event safety.

Some key data below to understand the market and the unmet business need:

- \* 87% of event planners are unhappy with their current planning options.
- \* 73% - No centralised system.
- \* 87% - No dedicated tools or platform for event site planning.
- \* 67% - No consistent style of planning
- \* 82% - Site plan is static - Plan out of date on creation.
- \* 91% - Sourcing up to date maps and satellite imagery is a major challenge.
- \* 70% say they are not aware of a system designed for event site planning.
- \* 48% say they will adopt OnePlan when the upgrades are completed.
- \* 35% will strongly consider.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NEW LEAF TECHNOLOGY SOLUTIONS LTD	Clustered Blockchain Platform for Air pollution Data Aggregation and Dissemination– A Big Data and Artificial Intelligence Approach to Air Pollution Tracking (Air-PoT)	£200,134	£160,107
Birmingham City Council		£0	£0
CAMBRI-TECH LTD.		£65,020	£52,016
Leeds Beckett University		£19,985	£19,985
RASUTA ENERGY LTD		£54,881	£43,905
SMARTELLA LTD		£29,995	£23,996
University of Hertfordshire		£127,745	£127,745

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Like other lung-diseases, Covid-19 is exacerbated by air-pollution. Numerous studies from Cambridge University, Harvard University, among others revealed that higher pollutants concentrations correspond with exacerbated symptoms, fatalities spike and increased Covid-19 virus transmission (The Guardian, 2020; Healthcare-in-Europe, 2020; NCBI's journal on Environmental-Pollution, etc.). Previous studies similarly showed that air-pollution exposure dramatically increased complications/death-risk from SARS [2003 coronavirus outbreak], and other lung-diseases like Asthma.

Scientists propose that since Covid-19 and high air-pollution concentrations will likely be around for a longtime, people with lung-diseases like Covid-19, Asthma, etc. should consider actively avoiding places at their times of high pollution concentrations to reduce pollution associated complications/transmission/death toll. This will consequently reduce potential Covid-19 deaths triggered lockdowns which are currently decimating businesses and economy. Avoidance behaviour requires active pollution monitoring at granular levels, and effective/live dissemination of monitoring results. Such results can support informed decision to lock down small pockets, as against a whole city, with spike in Covid-19 complications/transmission/death toll that correspond with high pollution concentrations, providing the opportunity to return pollution and associated Covid-19 complications/transmission/death in such pockets to lower levels quickly.

The UK currently has the infrastructure for such granular monitoring, with tens of thousands of Internet-of-Things (IoT) enabled pollution-sensors in operation (BBC,2019). These equipment/sensors are owned by 100s of councils (e.g. London Mayor has 100s of sensors in London, Newcastle has over 600, etc.); 100s of consortiums' schemes (e.g. Happy Crocodile, Beat the street, etc.); numerous authorities/organisations (e.g. Port of London Authority); and numerous private groups (e.g. Clean-Air Eastbourne has over 10 sensors)

These owners however share their results through many different uncoordinated sources/websites (e.g. breathe London web, hackair web, among countless others) which display information in very different ways thus making access and ability to understand this data/information difficult. The trend is similar across Europe with massive number of sensors (EU Science Hub, 2017; iSCAPE, 2017) and USA with over 100,000 sensors (Understory, 2019; BBC, 2019), disseminated via many different means.

This project thus aims to provide a central platform that allows pollution equipment/sensors owners a single plug and play access to share live pollution data, which is then relayed to interested users in a simplified and personalised understandable format using an app. This in line with the UK government's clean air strategy to provide a personal air-quality messaging system to inform public of air-pollution levels. The project will include:

- 1) A clustered blockchain centralised platform that
  - 1a) IoT pollution sensors owner can directly plug their data into for onward sharing.
  - 1b) will pay sensors owners for use of their data
- 2) an app that will use big-data-analytics, deep learning and predictive analytics (artificial intelligence) to

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

- 2a) display pollution data based on end users' areas of interest (e.g. using postcode or route search)
- 2b) produce a data centric air pollution model for areas without monitoring equipment.
- 2c) predict forthcoming pollution levels using historic weather, traffic and other pollution driving data
- 3) Databank of historic pollution data that can be bought for research, consultancy, policy making, etc.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KAPPA CAPITAL LIMITED	RAPIDRY - Low cost drying solutions for on farm food waste	£177,615	£142,092
BIOPOWER TECHNOLOGIES LIMITED		£103,668	£82,934
EAST OF SCOTLAND GROWERS LIMITED		£27,716	£22,173

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

UK generates 1.5 Million tonnes of food waste during production and processing. Many materials require stabilisation before use, drying is a common method.

Drying of biomass materials is an energy intensive activity; current standard processes are focused around the use of belt dryers and significant volumes of heated air.

RAPIDRY is focused on the ability to quickly dry fruits and vegetables cost effectively to remain the maximum nutritional profile and food safety. Critical to this is to reduce the consumption of energy, the project will demonstrate the energy benefits of distributed multi effect drying to the food and farming industry.

RAPIDRY will create food ingredients suitable for use in processed foods that will support increase health and nutrition.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BIOPOWER TECHNOLOGIES LIMITED	MaxFibre - Incorporation of low cost dietary fibre micropowder into commercial bakery products for societal health	£66,976	£53,581
FOOD SCIENCE FUSION LIMITED		£56,850	£45,480
PURATOS LIMITED		£15,576	£12,461
University of Chester		£59,646	£47,717

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The UN warns 'Our food systems are failing, and the COVID-19 pandemic is making things worse' and clearly points out 'we must strengthen social protection systems for nutrition' June, 2020\ . It is even more important to improve diet during and after the COVID-19 pandemic to aid recovery. UK Public policy is rapidly shifting towards the inclusion of greater levels of dietary fibre in foods especially for low cost products targeted at socioeconomic groups CDE, where choice is financially constrained.

Government guidelines published in July 2015 (SACN, 2015) and Public Health England (2016) recommended to increase dietary fibre intake to 30g /day, as part of a healthy balanced diet. However, most adults are still only eating an average of about 18g/day in the UK. It is still a challenge to use sustainable and low cost dietary fibre source for increasing dietary intake without compromising the food quality and sensory properties of foods.

Bakery products are a main source of dietary fibre in UK and western diet, providing about 25% of total dietary fibre daily diet. The aims of this project are to introduce a natural and low cost dietary fibre source in a micropowder format to bakery food products, delivering healthy baked goods with the nutrition claim of increased fibre and lowered sugar/fat cake products (20% sugar reduction and/or 30% fat reduction) both with pleasing sensory properties .

The project targets the high volume industrial bread manufacturing process and the "grab and go" cake sector with new increased fibre formulations

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CAMBRIDGE GLYCOSCIENCE LTD	Better Sugars For All	£205,072	£164,058
University of Cambridge		£87,496	£69,997

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Sugar doesn't just makes food sweet, it plays many other import roles such as texture, aroma and browning. To this day, there are no ingredients that can faithfully and economically replace the properties of sugar in food. As a result, sugar is still used in high levels in most mainstream food products, such as cakes, chocolate and biscuits.

Sugar consumption contributes to high blood pressure, obesity and type 2 diabetes, all high-risk factors for COVID-19, leading to an increased propensity of people with these conditions developing severe illness.

Cambridge Glycoscience has developed a first of a kind plant-based, natural, lower calorie and lower glycaemic impact ingredient that can replace sugar in food in a cost competitive manner. This project with the Dupree Group at University of Cambridge will help us further improve our product making better sugars for all. This will enable manufacturers in the UK, Europe and globally to make great-tasting, nutritionally enhanced, and cleaner label products, leading to healthier populations.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ICHROME LTD	CaeMeOnWeb	£112,534	£90,027

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The project aims at developing a Prototype for a web-based job submission system, with an integrated result visualization module. The project is specifically addressed to those SMEs that use Computer Aided Engineering (CAE) simulations to design their own products and to those SMEs that provide CAE based consulting services.

The proposed software will enable such SMEs to exploit their limited IT resources (hardware and software) remotely, in the most effective way and without need of additional remote-desktop services, VPN connections, etc.

The tool allows users to submit CAE simulations remotely via an intuitive and effective web-based interface, made available on common web browsers, as well as to preview simulation results via web-based CAE visualizer and, whenever deemed required, to retrieve and share results with the other members of the team.

The tool is intended to allow delocalization of resources opening up new working paradigms such as home-working and remote CAE consulting services as well as continuous management of simulations results.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EMERALD RESEARCH LIMITED	POSTCOVA - Post Covid-19 Agricultural Bioscience Innovation (Wales) - Novel biotechnology increasing sustainable vegetable production in Wales providing diversification opportunities for farming and employment challenged by COVID-19 and Brexit pressures	£112,098	£89,678
Bangor University		£112,613	£112,613
PUFFIN PRODUCE LIMITED		£110,687	£88,550
YMGYNGHORWYR LISK & JONES CYF		£45,108	£36,086

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

**\*\*POSTCOVA\*\*** is a 9-month research programme developing emerging solutions to secure post-COVID recovery and development of the agricultural sector in Wales. This will significantly improve productivity while reducing the environmental impacts of vegetable production.

**\*\*POSTCOVA\*\*** directly addresses the COVID-related disruption of the wider UK vegetable supply chain by providing technologies to immediately improve current vegetable farming productivity in Wales; currently lower than the potential like much of the UK. This will improve the country's food security and provide the potential for rural job security and further employment for those losing jobs in other sectors.

**\*\*POSTCOVA\*\*** will obtain field trial data validating novel disruptive technologies geared to boost farming production efficiency and improving soil carbon reserves while reducing greenhouse gas emissions (nitrous oxide and carbon dioxide), runoff of nutrients into watercourses and over/inefficient use of pesticides and fertilisers.

**\*\*POSTCOVA\*\*** aims to improve the productivity of key cultivated vegetables in Wales (potatoes, leeks, cabbages, cauliflowers, Brussels sprouts and carrots).

To deliver the above a Welsh-centred consortium has been formed and is led by Emerald Research (a soil science, precision agriculture and biostimulant developer & innovator) with biopesticide advice and management provided by Lisk and Jones (entomological specialists and biocontrol experts).

The consortium will benefit from technical, operational and trials support from Puffin Produce currently the largest supplier of Welsh produce in Wales, supplying a wide variety of potatoes and other seasonal vegetables to multiple major retailers and wholesalers under the banner "Blas y Tir" (Taste of the Land) with further project, academic and research support from the Biocomposites Centre at Bangor University.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
YOURTOUR VENTURES LIMITED	Virtual Visits: A Sustainable Alternative for the Tourism Industry	£228,093	£173,351
Loughborough University		£91,718	£91,718

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Spending leisure time exploring an attraction, famous landmark or a little-known cultural gem, is fun, educational, entertaining and good for the soul. It gives us a sense of belonging, helps us learn about our heritage and history -- warts and all -- and even has benefits for our mental wellbeing. So how can you visit these places now, in safety and comfort, now that social distancing restrictions will be around for some time yet?

\_"Good morning all. I'm Tom, your Hadrian's Wall tour guide today. Please put your headsets, tablets or phones on to enjoy one of Europe's best-known heritage sites. Once I press start we will be walking around the wall together and I will tell you all about it. Throughout our walk you will get to watch the wall built, manned and, eventually, quarried. We'll be starting, pausing and stopping together, but you'll have free roam to look around, as if we were there in person. Any questions, please use the chat function or put your 'flag' up to speak one-on-one with me. OK, let's begin at the Segedunum Roman Fort and Museum."\_ Tom Hudson, Tour Guide at Hadrian's Wall, is remotely guiding 28 people around the site via **\*\*\_Virtual Visits 'Together'\_\*\***, a revolutionary real-time group guiding system.

**\_Virtual Visits\_** use the latest 360-degree video technology to let you explore and interact with an attraction, historic building or landmark, using your tablet, smartphone, PC or Mac, or virtual reality headset. And all without leaving your home.

**\*\*Enjoy Group Guided Virtual Visits from your Sofa\*\***

You can choose to be guided around -- adjustable to your personal height level -- with friends and family by the attraction's super-knowledgeable tour guide. Guided together, you'll enjoy complete autonomy of what direction you look at and interact with features in a way never experienced before. You can also ask questions via the chat function and/or speak one-one-one with the tour guide throughout the tour, who will always be in the top corner of the screen.

**\*\*Or roam free with the incredible Floating Camera\*\***

Or, if you prefer to move at your own pace and in your own time, you can go solo, moving around freely using the Virtual Visits 'floating camera' -- move left, right, backwards and forwards as if you were really there, avoiding certain features whilst 'deep diving' into others that pique your interest.

Welcome to Virtual Visits -- the next best thing to being there in person.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DIGITAL IDENTITY NET U.K. LIMITED	Digital identity prototype to improve financial wellbeing from gambling addiction	£247,172	£173,020

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

For as long as people have gambled, there have been gambling addicts. Over the past 15 years, technological innovation and new freedoms for the gambling industry have increased problems, particularly for young people. Regulators struggle to even identify let alone contain the problem, which can often be across multiple continents and mediums. In July 2020, the House of Lords Gambling Committee recommended that the UK Government reclassify several categories of video games as gambling regulated under the auspices of the Gambling Act.

People who gamble regularly online are doing so just as often or more frequently during the coronavirus lockdown, despite the lack of sporting fixtures, according to the first significant survey of betting habits during the crisis. Minors run up huge debts on parents' credit cards chasing the adrenalin rush of uncovering loot-boxes containing hidden treasure within video games.

Our innovation is a direct solution to this problem, by the creation of a secure digital identity linked back to UK Bank identities, forcing gamblers and gamers to prove that they are who they say they are every time they participate.

DIN is building a collaborative ecosystem, or network, of participants that come together under a common rulebook and set of technical standards, to provide a new way for consumers to identify themselves online. This is referred to as the OneID (r) Scheme.

The principal benefits of this Scheme are:

- \* Simpler and quicker identity verification for the consumer
- \* Reduction in identity theft and fraud, through bank certified identity verification.
- \* Reduced cost of identity verification.

OneID (r) is an identity verification service provided in collaboration with participating banks to online businesses where some level of user verification for consumers is required. OneID (r) leverages the banks' trusted position in consumers' lives which uniquely positions them to attest to a user's identity and to provide trusted data about them.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CIRCADA LIMITED	Enlighten intensive care: a Circada bulb feasibility study, COVID-19 and beyond	£136,189	£108,951
Durham University		£55,046	£55,046

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In 2020, COVID-19 catapulted critical care into public awareness, shining a spotlight on the function and design of these specialist units. Most of us, thankfully, would never have visited an intensive care unit (ICU) and would have little knowledge of the design of such environments. With the rapid construction of field hospitals, offering intensive care on an industrial scale, the media presented detailed images of the layout, structure and equipment one would expect to find, thus heightening public awareness of the nature of critical care departments. What can be seen in such imagery is the stark clinical nature of the typical ICU. Designed with infection control and the administration of crucial medical treatment in mind, a typical bed space is highly functional in appearance, constructed of easy to clean (and often colourless) surfaces/materials. Functionality is key and it is common for such spaces to be uniformly lit by electric fluorescent lighting, having few or no windows. ICU seems an alien environment and despite consistent research demonstrating the therapeutic quality of windows - particularly with a view on to nature, colour and imagery, intensive care is stripped of such things, designed purely for medical purposes.

Circada improves health, wellbeing and productivity providing the first fully health-orientated approach to general lighting. It is working with Durham University to generate user feedback in a real-world critical care environment.

With applications both in institutional settings (hospitals, care homes, prisons, offices) and for the isolated ageing consumer at home, this research will inform product development of Circada lighting, as well as research into Circada as a potential intervention in reducing delirium rates in critical care, including those with COVID-19 (who are at increased risk of delirium compared with non-COVID-19 inpatients and more resistant to traditional treatment, which is limited in itself). The qualitative assessments taken during this user-testing period will inform iterations and improvements to the prototype, establish feasibility and assess the health and wellbeing benefits to both patients, carers and healthcare staff, through Durham University's 'Enlighten Delirium' project, providing the basis for future clinical validation.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TYMIT LTD	Tymit: Instalments as a better form of borrowing to help economic recovery from Covid-19.	£241,117	£173,604

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Credit cards provide a secure and protected way to pay for goods and services, with card holders able to repay at a schedule that suits them. However, traditional revolving credit can be very opaque in terms of interest and users can find themselves in persistent debt due to just paying the minimum monthly payment each time. Instalment credit is proving popular with consumers and regulators as the user has a clear timeline to pay off the product and can be clear how much interest is charged to that particular purchase.

Covid-19 has severely impacted the UK economy as a whole and impacted many individuals personal finances due to furlough and redundancy affecting more than one in four workers. Whilst a temporary measure for the majority this has impacted consumer confidence and thus many sectors are still suffering as the country emerges from lockdown. We aim to develop and provide a wide reaching instalment credit product that provides users with flexible, transparent instalment options that can be changed and viewed within our app.

Tymit have developed a Fintech app enabled credit card that facilitates instalment payments. Our notification enabled system allows users to select their instalment plan after purchase and modify terms whilst always knowing how much an item will cost them including interest, view spend analytics, bundle purchases into a specific instalment plan and a simulator function to assess affordability.

Tymit is available in the UK and merchant agnostic. Where instalment credit functions such as Klarna, Zip and Openpay are specific to certain merchants and require lengthy integration with their e-commerce systems, Tymit works as a credit card suitable for anywhere that accepts VISA. We will undertake key technical development to integrate our system within the larger VISA ecosystem and develop mobile device payment integration to increase our reach and competitiveness.

In addition to our Fintech aims it is important that we seek to grow and manage our operations in a way that promotes environmental sustainability within our business and in the wider perspective. We will scope and action a number of different strategies that develop sustainability within our core business by developing fully paperless systems, scoping wooden/metal credit cards and building functionality to enable rounding up of pennies on large purchases for charity donations (opt in or out for consumers).

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PAULEY GROUP LIMITED	5G Integrated Railway AR Digital Twin	£171,333	£137,066
ATHONET UK LIMITED		£99,159	£79,327
HS1 LIMITED		£27,155	£21,724
NETWORK RAIL (HIGH SPEED) LIMITED		£89,200	£71,360
University of Sheffield		£94,073	£94,073

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The rail industry has seen reduced passengers and revenue and due to COVID-19, the challenge now is to attract passengers to a more reliable railway through diagnosing faults quickly and efficiently. HS1 has also had to deal with increased maintenance costs of network assets due to additional time using PPE and engineers traveling in separate vehicles to diagnose faults. The current data infrastructure isn't capable of reporting vast amounts of information in real time and doesn't allow engineers to quickly isolate the location and reason for the fault.

The aim of the innovative R&D project is to implement remote condition monitoring to diagnose faults without need to wear PPE and travel to the equipment. 5G technology allows for real time data to feed into an augmented reality digital twin (ARDT), allowing for remote condition monitoring of rail assets and live data feeds to engineers at the point of need. The benefits include reduced costs, time and CO2 emissions as a result of maintenance activities taking less time to complete.

The project team (led by PAULEY, supported by HS1, Athonet and University of Sheffield Advanced Manufacturing Research Centre (AMRC), will demonstrate the unique capabilities of a 5G enabled ARDT platform for use within a station, and several kilometres of track, as breakdown of lifts and escalators have a significant effect on passengers' journey and experience. The project will focus on the potential for ARDT to revolutionise the way in which rail engineers monitor and maintain equipment. The immersive environment will be modelled on St Pancras International.

ARDT will support engineers in making effective decisions in a virtual environment. Broader impacts include:

- \* Health and safety -- reduction in maintainers' travel and interaction with high voltage equipment, and reduced time spent on track.
- \* Maintenance -- increase competency of engineers through the ability to visualise engineering work instructions which leads to quicker and more accurate repairs.
- \* Skills and training -- provide opportunities for professional training and competencies that are currently learnt in situ.
- \* Customer experience -- a more efficiently run and reliable rail network will ultimately lead to an improved experience for passengers and customers.
- \* Scalability - Aligned to the National Digital Twin principles to enable integration into the wider rail network.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RAD PROPULSION LTD	Rim drive electric propulsion for small boats	£216,406	£173,125

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This is a 7 month project by RAD Propulsion Ltd to undertake experimental development of an innovative new marine electric propulsion system using rim motor technology and a novel hubless propeller design. The system is targeted at both the commercial and leisure small boat marine market.

Marine propulsion is a multi-billion pound industry undergoing a rapid change from direct drive diesel and petrol to electric. To support this change there is an urgent need for innovative electric propulsion systems like the one proposed in this project. The rim driven hubless system we propose is safer (no external rotating blades), robust to becoming entangled with debris and has minimal moving parts and so will be well placed to fill the identified market gap, which is estimated to be worth approximately £150-200m /year with strong indications of significant further growth over the next decade as electric systems replace fossil fuel incumbents.

Our goal is to bring products to market that deliver zero emissions, utilize sustainable manufacturing techniques and product life cycle, provide exceptional performance, improved safety and most importantly for electric propulsion, confidence and trust for our customers transitioning from fossil fuels. RAD Propulsion is looking to develop a range of such systems and this project will look to develop a product which is targeted specifically at marine leisure and commercial market in the sub 2 kW category.

This project will:

- \* design, develop and integrate the worlds first compact (sub 2kW) rimless electric motor with an innovative hubless propeller design,
- \* develop and integrate this motor assembly into an overarching system to produce a prototype propulsion system which can then be evaluated in a representative marine environment to verify the design approach and system performance to de-risk the subsequent productisation.

Electric rim drives and hub-less propellers are not new technologies but the merging of the two together into a single product which plays on the strengths of each technology to achieve the levels of performance and weight needed in the target market means its introduction will be both innovative and transformative to the marine market in this power range.

The marine industry has been severely impacted by the current Covid-19 pandemic. We see this directly with our potential customers as well as all the organisations involved in our prototyping, product development and supply chain.

Numerous companies are starting to cut back, reduce costs and release staff to reflect the potential drop of future sales. This project and the associated grant funding will directly maintain the momentum of the business, allow us to move in to a new sector and prepare the business for when the market recovers. Winning this grant will enable RAD to recruit more people and support the UK economy with the world wide launch of the first British truly innovative electric hubless marine rim drive.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HANZO ARCHIVES LIMITED	Reduce Information Security and HR risks created by inappropriate staff behaviour on collaboration platforms	£217,767	£174,214

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has accelerated existing trends to both 'work from home' and 'work anywhere'. The adoption of collaboration platforms has eased the shift to a certain extent, but simultaneously exposed organisations to new threats to information security, HR and regulatory compliance, based on the behaviour of employees, staff and contractors. Few tools are available to tackle this increased level of 'people risk' that extends to fraud or racial and sexual harassment, gender bias or other policy violations. The very large volumes of dynamic and unmoderated content on collaboration platforms mean that without the right tools in place, the shift to WFH and WFA creates a "ticking time bomb" for many organisations.

### **\*\*IT Data risk\*\***

Outside of the controlled environment of the office, employees are more likely to lose, accidentally give away data, Intellectual property or open-up security vulnerabilities and ultimately create irreparable damage. For example, credentials may be exchanged in Slack, confidential information shared in public channels, etc.

Whilst software and hardware solutions secure the data 'at rest' or 'in-flight', the human risk of a voluntary or accidental leak is left wide open as the employees 'work anywhere' and are in contact with 'anyone'.

### **\*\*Use cases: Insider threats\*\***

- \* Information Security theft and data leak
- \* Intellectual property leak
- \* Sensitive or PI data exchanged
- \* Security breach

### **\*\*HR Risk\*\***

Patterns of behaviours that would have been identified in an office could go undetected and hide cases of harassment, fraud, mental health and other HR issues. With COVID, groups of individuals react differently from the transition to working outside the office and some suffer from mental health issues or simply struggle with remote working away from the day to day contact with colleagues. This will also address core issues of diversity, equality and inclusion in a remote virtual environment.

### **\*\*Use cases: Undesired behaviours\*\***

- \* Harassment, discrimination, bullying
- \* Impact on equality, inclusion and diversity-identification of sexist and racist hate speech, relevant with MeToo and Black Lives Matter movements. Technology can give employees an equal footing in conversations.
- \* Undesired behaviours and toxic language, intentional or unintentional (non verbal cues)

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

- \* Compliance with industry regulations (e.g., anti-bribery, collusion, etc.)
- \* Trend analysis reflecting morale and cultural changes in virtual workplaces

**\*\*Innovation\*\***

Although solutions exist to protect organisations like Data Loss Prevention or to monitor conversations for compliance, they are restricted to basic keyword matching or message level rules, usually operate "on the edge" message by message and do not consider patterns of behaviours that underpin the broader issues.

Consequently, the characteristics of harassment, bullying or other behaviours that would have been picked up by colleagues in an office would go unnoticed on a collaboration platform. In a similar way, abnormal patterns of activity would fail to be correlated to a confidential company event, new product launch, IP disclosure.

The proposed solution focuses on analysis of behaviours through collaboration platforms such as Slack and MS Teams to proactively detect abnormal behaviours, deviations from baseline and trends. It is based on AI models trained to recognise patterns of behaviour and text analytics designed to identify PI, entities, sentiment, toxicity, emotion, etc.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CORACLE ONLINE LIMITED	Secure digital in-cell technology to support prisoners and other isolated learners	£132,563	£106,050

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 continues to have a major impact on the UK prison system. Our primary concern at this time of great uncertainty is the health and wellbeing of those in our most vulnerable communities. Prisoners have been unable to receive visitors, support from outside organisations has been curtailed, prisoner movements have been severely reduced and prison officer numbers reduced due to self-isolation. This has an adverse impact on prisoner education, mental health and wellbeing and put the prison system under increased stress.

Coracle is delighted to have been awarded grant support to help tackle the issues of isolation that are acutely seen within the prison estate and are grateful for the opportunity to be able to support HMPPS with the roll out of our innovative, patent pending "Coracle Inside" technology that allows prisoners access to in-cell digital education, without breaching security or allowing access to the internet. This support will let us build on the successful pilot testing facilitated by the initial grant and help us to make the system truly flexible, scalable and interoperable.

The recent initial pilot has allowed us to expand the range of different use cases and demonstrate the system efficacy in 10 prisons throughout England and Northern Ireland.

James Tweed, founder of Coracle said. "It's a well-researched fact that prisoners who engage in education are less likely to reoffend. Covid-19 has impacted prisoners access to education. One problem is any form of internet access is forbidden in prison. This severely restricts access to course materials and the digital tools that most of us take for granted, especially for those that are vulnerable or self-isolating. Coracle Inside laptops are issued to prisoners for use in their cells whilst ensuring 100% separation from the internet or any other devices. We allow syncing through patent pending Coracle Inside Hub, installed in a location with supervised access. The system has passed rigorous Ministry of Justice security testing and can be used to assist learners with any kind of course whether academic, vocational or self-improvement. We also support health, mental health and wellbeing programs. Our focus is now twofold -- firstly to further demonstrate the system to prison governors, prison education managers and heads of reoffending and rehabilitation and secondly to work with organisations that support prisons in improving learning, skills development, mental health and wellbeing so their materials can be delivered digitally in cell."

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TELESTO IOT SOLUTIONS LIMITED	Reopening football Stadia and Sportsgrounds with T4S - Thridium Stadium and Safety Security System	£212,034	£169,627
CROWD DYNAMICS INTERNATIONAL LIMITED		£149,879	£119,903

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Current safety procedures at large event venues are plagued by paper-based methods, outdated evacuation planning, and a lack of sufficient situational awareness to respond effectively to threats. Recent incidents have highlighted that this continues to be problematic, such as the Manchester Arena bombing 2017 ([<http://www.bbc.co.uk/news/uk-england-manchester-40008389>][0] ), the Las Vegas Mandalay bay shooting attack, 2017, Hope & Glory festival, Liverpool ([<https://www.theguardian.com/music/musicblog/2017/aug/09/music-festivals-gone-wrong-fyre-hope-and-glory-y-not>][1] ), and the Sunfall Festival ([<http://www.factmag.com/2017/08/12/sunfall-festival-2017-queue-chaos/>][2] ). These, and many more examples, highlight the need for a solution that will support decision-making and strengthen venue preparedness.

In the post-COVID world of sports there is an opportunity in the market for enabling digital technology in this environments, as large event venues attempt to reopen under social distancing and reduced capacities, bolster their preparedness, primarily for safety reasons, but also to maintain revenue as patrons are becoming increasingly aware of the need for secure events, and must trust a venue's security before deciding to attend.

Existing solutions do not address the business need highlighted above. The current state of the art is either partial or ineffective solutions and are not able to provide a comprehensive solution for mitigating the risks of COVID. Commercial crowd simulations (LEGION, MassMotion) are not responding in real-time to incidents. Real-time solutions based on CCTV to count visitors into the event, will fail to deliver any results especially in conditions where accurate distancing between spectators is expected to be respected.

T4S is superior as it harnesses real-time data analytics and forecasting which we achieve by exploiting advances in IoT devices and big data practices and real-time simulators.

The T4S project will further develop the components of the system and the system as a whole, adapt and validate it against the newly emerged needs of the entertainment and sport venues, offer interoperability with legacy systems (Bosch's Building Management System to begin with) to build increased situation awareness, thus leading to a market-ready prototype. UWB Bracelets worn by spectators and Floor LED guidance systems, will be among the key features provided in the updated T4S version, that will guarantee:

- a. enhanced monitoring and adherence to the social distancing rules as applied in football stadia
- b. total protection approach as after this project, T4S will provide a complete solution against different types of threats and challenges faced by football stadia and other large scale infrastructure that are classified under urban soft targets.

T4S will ensure sports venues reopen, with public health on top of the agenda and business/ecosystem sustainability as key deliverable.

[0]: <http://www.bbc.co.uk/news/uk-england-manchester-40008389>

[1]: <https://www.theguardian.com/music/musicblog/2017/aug/09/music-festivals-gone-wrong-fyre-hope-and-glory-y-not>

[2]: <http://www.factmag.com/2017/08/12/sunfall-festival-2017-queue-chaos/>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VEELOOP LIMITED	Merchant integration and expenses module for volunteer payment service	£209,128	£167,302

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project brings together payments and financial technology to enable safe and convenient payments for volunteers helping vulnerable people with essential purchases during lockdown and beyond.

We developed the vHelp service prototype in April and developed a fully automated app with a grant from Innovate UK. In the current version of the service volunteers have to pay for any shopping they do and then get reimbursed after delivery is completed.

Through the work done on the vHelp app development we established that the priority for voluntary organisations and local authorities is that volunteers do not use their own funds, avoiding being out of pocket, even for short periods. Another problem we identified during the vHelp app project is that managing volunteers expenses is a considerable admin burden for volunteer managers.

This project aims to:

1. Create a solution that integrates with retailers and enables a card payment from the vulnerable person to retailers directly. This will meet voluntary organisations' priority to ensure volunteers don't use their own funds.
2. Build a volunteer expenses payment module to reduce admin for organisations and ensure a smooth experience for volunteers claiming expenses.

The results of this project will allow us to modify the current business model, which has proven challenging for our target market, voluntary organisations. The voluntary sector is under immense financial pressure and any cost they may need to incur creates a significant adoption barrier for services.

This will enhance our competitiveness and increase the stickiness of our offering. The expenses payment module opens opportunities for new revenue streams and growth routes.

We are currently working with the voluntary/third sector but, once our solution is stable we will expand to the social care sector, as the service can be used by carers looking after elderly or vulnerable people. Our short term focus is the UK, however we've already had interest from European countries dealing with Covid19 and facing similar difficulties with payments. We will explore international expansion once our technology is established in the UK.

The current social context is encouraging the reliance on volunteers and community support for economical sustainability and social responsibility reasons and this service delivers positive impact on both fronts.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CECENCE LIMITED	Sustainable Aerospace Seatback	£217,905	£174,324
ELG CARBON FIBRE LIMITED		£102,941	£82,353
NCC OPERATIONS LIMITED		£80,462	£80,462

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

\* This six-month project will enable the development of a recycled carbon fibre and bio resin sustainable aerospace passenger seatback, which is fully FST compliant and passes 16g, prior to a pilot production run in its next development phase. This will be an enabler in the ambition for a carbon neutral narrow body commercial aircraft which Airbus are planning on entering into service in 2035\.

\* This project will demonstrate how recycled carbon fibre can be utilised in a structural interior component. The development will include adaptations of non-woven carbon felt matting and the production of a unidirectional carbon fibre material 'sliver' which is capable of achieving the necessary structural load bearing requirements of a 16g crash-tested seatback. A new sustainable bio resin, novel impregnation methods, automation of the lofting process and nesting and efficient cutting of the dry cloth prior to impregnation will allow for any waste to be directly returned to produce new dry cloth.

\* The aerospace industry need sustainable solutions to enable them to recover from the pandemic. Aircraft manufacturers are looking to commission new energy-efficient planes rather than attempt to refurbish an existing fleet, with safety, lightweighting, and fuel saving as the main drivers. The post COVID-19 passenger of tomorrow will not only be expecting a hygienic and modern interior environment, made possible in part through the use of composite materials, but will be much more knowledgeable about environmental concerns. To attract a new customer base and win back previous clients, airlines will need to demonstrate their commitment to both a COVID secure environment and a sustainable environmental policy.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FREYDA LTD	Freyda: Improving Financial Decision Making in Response to Covid-19	£185,640	£148,512

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Freyda is leading the revolution to digitise the investment industry, utilising the latest advancements in AI to reduce manual data entry and facilitate better investment decisions powered by data.

This project will focus on the development of 'Intelligent search' functionality to allow users to quickly and accurately locate and query critical information that has been extracted from their corporate documents using the platform. The new feature will enable investment professionals to improve financial decision-making and will drive organisational, industry and economic growth.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INGENZA LIMITED	High-performance yeast for sustainable liquid fuel	£215,671	£172,537

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Carbon utilisation in bioethanol production by the yeast *Saccharomyces cerevisiae* suffers significant efficiency losses because the organism also produces glycerol as a (waste) co-product to help maintain its osmotic balance. This low value waste product compromises bioethanol yield by up to 5%. Others have tried to address this problem, employing yeast bioengineering to reduce glycerol production and redirect more feedstock carbon instead to ethanol. The approach has achieved partial success, increasing carbon efficiency and maintaining cellular reduction-oxidation (REDOX) balance. The limitation of earlier approaches is that the intermediates of the engineered metabolic pathway to ethanol can be converted to other cellular metabolites, such that the full carbon redirection benefits cannot be realised. Our innovative approach provides key advantages over that of our competitors. It will similarly reduce glycerol synthesis but instead redirects carbon to ethanol via an alternate intermediate which is not otherwise metabolised, thereby potentiating maximal carbon use efficiency and ethanol productivity gains.

Ingenza has conducted yeast bioengineering for over 10 years, developing all necessary expertise, enabling technology tools and capabilities to deliver this project. Our go-to-market strategy involves the commercialisation of project outputs under an existing technology license relationship with a major international partner. We will safeguard our project outcomes through patent protection and the partner's policing. The potential return on project investment represents significant value for both Ingenza and UK taxpayers. The global bioethanol market is dynamic with (until recently) 5.3% CAGR (2014-2019) and usage in 2019 of 29 million gallons globally. While we recognise that there are alternative opportunities for the technology in many markets (e.g. beverage alcohol) the bioethanol market alone is expected to be valued at \$79.6 billion by 2024. Successful deployment of the project technology could secure significant returns for Ingenza, underpinning job protection and investment in future growth initiatives. The project will allow a leading UK developer of industrial biotechnology to aggressively participate in a synergistic commercial collaboration to deliver disruptive technology that expands the use of sustainable liquid fuels and advances the UK bioeconomy more broadly, to positively impact climate change and environmental sustainability.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VANGUARDIA LIMITED	Virtual Audience Acoustic Reality - 2 Way App	£187,324	£149,859
ALAN SAUNDERS ASSOCIATES LIMITED		£99,741	£79,793
BURLAND T.M. LIMITED		£42,331	£33,865
SUSTAINABLE ACOUSTICS LTD		£131,518	£105,214

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Virtual Audience Acoustic Reality (VAAR) - 2Way Application is an innovative project that provides a Virtual Venue Interface (VVI) to the many initiatives that are being developed to support the sport and entertainment industry as it tries to recover from the effects of Covid 19 pandemic.

The general need and parameters of the project have been defined from an earlier Innovate UK Grant (VAAR - Covid 19) awarded to the team to develop a conceptual design and business plan for a 2-Way truly immersive experience for a remote audience, that is not physically at the venue. The implications of doing this successfully are hugely significant on many levels, and go back to the Greeks approach to early government in connecting the masses, but are not currently within the reach of humanity. Technological advances are changing this.

The vision of the initial project were therefore humble, based on enabling a remote individual or group to obtain a virtual ticket and enjoy an equally engaging live atmosphere from a music or sporting event delivered via a direct link from the venues sound and vision systems to receive a high quality blended real-time/ "live" experience. The requirements and feasibility of a unique platform and Interface to enable this experience to be shared across a number of social groups and with the artist (or athletes if sport) has been defined and the concept tested in the original programme. This project will take the output from this earlier work and create an exciting user friendly interface that participants can access events remotely, live, and in a way they can interact and be seen and heard in real-time. This offers exciting opportunities for emerging technology and new applications to be used in complementary ways.

The Interface will be not only support our VAAR-Covid 19 project but also provide a gateway to other similar and complementary initiatives enabling users to be connected to hospitality (including food, beverage, and hired technology), and opportunities for merchandising and sponsorship. It is an opportunity with incredibly broad benefits.

Further features of the Interface will promote agile engagement with entertainment and access to all areas. For sports clubs, players and artists outside of the core event it would not be possible to otherwise share what happens easily. Access to training sessions, rehearsals and other peripheral activities could be provided through the Interface. In this way it fosters greater loyalty and inclusiveness between performers, sports personalities and audiences, in a direct way not seen since the advent of the one way television broadcast.

This Interface will revolutionise the way audiences can choose to access and enjoy live content, providing greater reach for audiences and artists and additional opportunities for revenue streams for smaller venues and lesser known artists.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STRAX (U.K.) LIMITED	STREAM-TWS: True Wireless Stereo headset with innovative offline access to cached streamed audio content and playlists.	£218,385	£174,708
SLICETHEPIE LIMITED		£124,493	£99,594

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Less than 40% of music is now listener owned, with streaming services increasingly dominating the market. Existing earphone solutions always require a paired device to be in range if the listener wants to take advantage of the benefits of streamed music and this can be very restrictive in many circumstances, from a device security and safety perspective, and in terms of convenience. Strax intends to fill this gap in the market with a Strax-branded proprietary solution. It will provide an in-ear earphone technology with in-built access to high-quality streamed content, even when not in range with a paired device. This capability will be enabled via technological advances, and licenced-enabled access to content and user-define playlists. The product will be the first to market with offline streaming capabilities contained within discrete and fully wireless earbuds, and alongside Active Noise Cancelling, it will incorporate a novel proprietary noise reduction capability currently in development at Strax.

In the 9-month STREAM-TWS project the partners will develop the technology to pre-production prototype stage, with features and functionality validated through engagement with consumer panels in the USA and UK. Loughborough University's centre for Sustainable Manufacturing and Recycling Technologies will be engaged under sub-contract to evaluate the environmental impact of the product from 'cradle to grave', and to provide insight for consideration in specification, design, manufacture and supply.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WIZHERO LTD	Sustainable and safe solution for the remote participation in sports and exercise	£181,207	£144,966

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

WizHero is developing an AI-enabled piece of software that can watch and guide a person as they exercise in their own home. The initial concept is that the user will perform their activity/sport in front of their computer or mobile device and the application will analyse their "form" and body position and movement and provide coaching and advice. WizHero's initial market focus is to teach home fitness positions.

The commercial concept is to provide the fitness or Yoga teacher with a digital solution that enables the fitness teacher to have a distributed or virtual school of pupils, in their own homes. The value is to provide sports and activity coaches with a productivity solution that enables them to massively increase the number of students they can have in their lessons and hence their income.

WizHero is an inclusive company that enables equality, diversion and inclusion both through the fundamental design of its software and operations, and through its company policy.

WizHero has a basic working prototype of this application that can "recognise" and assess the correctness of the user's fitness and Yoga positions. To build a viable product, the team needs to develop an AI model that works reliably in different lighting conditions and with different backgrounds and can separate multiple people.

The team will create a solid base in technology and structure that will subsequently be applied to other sports like running, cycling, cricket and football. Once developed, the solution will be marketed to sports coaches including online coaches in the first instance, then to gyms, fitness clubs and physiotherapy providers.

Our mission is to improve the fitness and physical activity level of the general public with attendant health and wellbeing benefits.

This project is directly relevant to priorities in terms of responding to the Covid-19 pandemic and environmental sustainability. Specifically:

- \* This solution enables people to exercise while respecting the need to be socially isolated.
- \* Users don't need to travel to a central venue to exercise or practice their sport, hence this solution will reduce the use of transport-related pollution associated with sport/exercise.
- \* The solution provides anybody, at any time and place, to access high physical activity and high-quality sports coaching expertise regardless of the origins or socio-economic situation.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRICHORD LIMITED	Scaling customised Die Diffusion printing to enable mass finishing close to the customer.	£119,928	£95,942
HEIGHTS (U.K.) LIMITED		£172,981	£138,385

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Trichord and Heights intend to develop and launch high volume High Definition Die Diffusion printers to the apparel and finishing market which will substantially transform the manner in which many complex 3D products can be finished. Die-Diffusion is a method of printing high definition images or designs onto complex 3 dimensional surfaces of many materials including glass, metals, fabrics and plastics. The master image is printed onto a photographic film (the carrier). The product and film is fed into an Infra Red oven which is used to soften the film before a vacuum is applied which forces the film to wrap tightly around the product. The combination of Infra red light and the vacuum then excites the molecules at the surface interface between the product and film and the die diffuses from the carrier film into the product.

Trichord are the innovators of High Definition Micro Diffusion and hold patents on the technology. The machines are developed in partnership with Heights (UK) Ltd based in Halifax who build the machines for Trichord. The film is produced by Gtech Paper and Film Ltd Ltd, a UK company based in Portsmouth.

The Die Diffusion process is uniquely different to Die Sublimation printing which is the more traditional die transfer process. Die diffusion operates at temperatures of 130 degrees C to 150 degrees C, this is up to 30 degrees C below the temperatures traditional Die Sublimation techniques operate at which are in the range of 160 degrees C to 180 Degrees C. The lower temperatures enable the process to be used on products such as polyester shoes and EVA which have lower melting points.

Currently the technology is used to print small batches (up to 10,000) of personalised goods such as phone covers and coffee mugs. The project will adapt existing die diffusion technology and machine build technology to produce a continuous process printer which will be capable of high volume production (up to several million units per year). Finishing close to the customer will move the supply chain back on shore, significantly reduce (or eliminate) obsolete inventory which will also bring significant environmental advantages as the total carbon footprint will be significantly reduced.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MEDICALISYS LTD	Dialysis Away: A Cloud Platform helping UK dialysis patients (a COVID-19 clinically extremely vulnerable group) to resume temporary treatment sustainably and safely away from their home clinic	£174,886	£139,909

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Over 24,000 UK patients undergo in-clinic haemodialysis ("ICHD"), a complex, life-preserving treatment taking place 3 times per week. Many suffer from other conditions such as diabetes and hypertension.

Prior to COVID, ICHD patients were able to dialyse away from their home clinic to visit family, friends or take a holiday. Given the commitments involved in their treatment, the ability to travel played an important role in increasing their quality of life.

Whilst travel restrictions are easing for the healthy population, travel options for ICHD patients remain severely limited. Clinics are not currently accepting temporary patients, forcing ICHD patients to return to their home clinic every other day. There is likely to be a considerable lag before ICHD patients can travel as they did before and, should 2nd waves occur, this option will disappear once more unless clinics can find a way to process temporary treatments easily and safely. This threatens to leave many ICHD patients severely isolated.

DialysisAway is designed to make the sending and receiving of temporary ICHD patients more viable in the new post- COVID-19 reality, helping ICHD patients to resume travel in the same way they did before.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADS INDEPENDENT LIVING SOLUTIONS LIMITED	Smile Homes by ADS: Purpose-designed, Intelligent, Volumetric, Person-centred Homes for Independent Living	£51,702	£41,362
REDS10 (UK) LIMITED		£61,729	£49,383

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

ADS Independent Living Solutions provides 'a different solution' to person-centred, purpose designed homes for people with learning disabilities, autistic people and people with mental health, behavioural and physical challenges.

We take the time to understand each customers needs and wishes to focus on personalising spaces and using technology to improve wellbeing. Our objective is to provide people with their own home from which they can live safe, healthy, fulfilling and rewarding lives. These homes are: -

- \* Scalable - flexibility to deliver as single homes, clusters or blocks of flats
- \* Modular - factory built volumetric units redefining design from a user perspective & minimising site works
- \* Intelligent - with person-centred technology; the right kit for the individual
- \* Lifetime - flexibility to meet changing needs and the ability to redeploy homes where they are needed
- \* Efficient - minimising running costs as part of an ethical and sustainable affordability approach

We call them Smile Homes(r)

As a Social Enterprise, ADS is committed to ethical rather than market pricing to make its homes as accessible as possible and help provide a new choice for housing for those trying to live as independently as possible.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PHOTOCENTRIC LIMITED	Low energy mass manufactruing of PPE using visible light 3d printing	£213,734	£170,987

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The Covid19 crisis has shown how the lack of PPE and suitable medical equipment can lead to a national health crisis. This aim of this project is the creation of a both sustainable and versatile solution to the manufacturing shortage experienced in the last 6 months. It will enable the UK to have its own domestic manufacturing resilience, which is entirely made from renewable sources. The recent large usage of PPE is creating an ecological problem as tens of millions of single use plastics are being thrown away at an alarming rate. This project will aim to address both problems of shortage and sustainability.

Photocentric, a UK company, invented the using LCD screens to create 3D printed objects using low-energy visible light to selectively cure photopolymer. This concept has been successfully commercialised with the manufacture of large format industrial 3D printers made in Peterborough. Photocentric has now validated the mass-manufacture of PPE during this crisis by manufacturing nearly 2 million face shields for the NHS. This project will optimise this process to enable it to be transferred to make an unlimited number of different items at a time of need. The process will be automated and can be delivered in a shipping container as a mobile 3D printing factory for the fabrication of PPE and medical devices at the point of need. The 3D printing resins used in this process will be developed and manufactured in the UK, using 100% sustainable resources including 30% recycled materials.

In Summary, this project enables low-cost, rapid and versatile manufacturing of PPE and medical devices using low energy LCD screen 3D printing with 100% sustainable materials form UK derived technology, made in the UK.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADVANCED BIOFUEL SOLUTIONS LTD	Biohydrogen Production for Public Transport	£291,220	£148,522
University College London		£90,924	£90,924

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has reduced demand for bus and train travel in the UK by more than 70% which means that the sector relies on large subsidies just to keep operating. At the same time, the Government's net zero objective requires dramatic reductions in carbon emissions from public transport. There is a significant risk that the economic impact of the virus may lead to the deferral of the important investments required to deliver a low carbon public transport network.

Before the virus hit, bus companies were beginning to use hydrogen buses on long distance journeys and train operators were assessing which lines are suitable for conversion to hydrogen. However, concerns over the availability of affordable, low carbon hydrogen were delaying the adoption of this important technology. It is possible that the additional uncertainty caused by COVID-19 may halt the development of hydrogen in public transport completely. This would substantially reduce the probability of the sector meeting its net zero objectives.

The Biohydrogen for Public Transport Project will assess the technical, environmental and economic performance of hydrogen made from household waste to assess whether it can supply train and bus operators with an affordable fuel that gives them the confidence to convert routes to hydrogen. This will help them work towards Net Zero targets while recovering from the impact of COVID-19 on their businesses.

The project will leverage Advanced Biofuel Solutions' gasification plant in Swindon and University College London's Electrochemical Innovation Lab to develop a pathway for the production of transport grade, low carbon hydrogen at a price that means hydrogen trains and buses can compete with diesel vehicles. If successful, the project will show that household waste can be converted into high purity hydrogen with a very small carbon footprint. This will lead to the production of significant quantities of hydrogen in 2021\.

In addition, the project will develop innovative approaches for operating and testing proton exchange membrane fuel cells, an strategically important technology as hydrogen plays an increasingly important role in the UK's energy landscape.

COVID-19 has reduced the innovation funding available to University College London and Advanced Biofuel Solutions because of a reduction in student numbers and the additional costs from dealing with the virus. This grant will allow both organisations to continue important research activities that would not be possible without new incremental support.

The Climate Change Committee recognises that the production of hydrogen represents one the the most environmentally beneficial uses of waste and that hydrogen is the most sustainable fuel for some public transport journeys. This project will develop these concepts and provide public transport service providers with the confidence they require to invest in low carbon vehicles despite the uncertainties caused by COVID-19\.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NOTE TAKING EXPRESS LIMITED	NFeedback - improving online learning outcomes	£218,652	£174,922
University of Southampton		£74,063	£59,250

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

NFeedback will use AI, especially Natural Language Processing (NLP), Computer Vision (CV) and Knowledge Graphs (KG) to create both live and offline feedback for Note Taking Express's current digital classroom solution. In an online teaching environment, many interactions are missed compared with traditional classroom teaching, such as the number of attendees, students' facial emotions, body language etc. These AI services will provide valuable information on non-verbal emotions and signals. Then based on each user's profile, automatic feedback can be generated for teachers and students, together with suggested improvements and support.

KG (sometimes also referred to as Ontology) is a technology which structurally describes the concepts and relations between concepts, so that AI systems can spot patterns of data and give connections within the data. This reasoning process offers feedback to HEI administrators, teachers and students. Accessibility is an important component of the feedback to consider diversity of learning styles. If it's an online lecture, for example, a deaf student may require Closed Captioning turned on whereas a visually impaired student may need text to speech to read out text on the screen or description of images.

At a more granular level we will be structuring a number of work packages to collect more information about the lecture to feed into the KG, so that our AI solution can decide what needs to be feedback to school admins, lecturers and students. We will be collaborating with University of Southampton (UoS) to obtain the data from open datasets (Southampton Open Data Service, for example), and other clients current course management systems, such as BlackBoard or Moodle.

Following the above, we will use lecture audio/video content recorded from our existing digital classroom solution and generate a semi-structured data store for further analysis. From this we can further enhance the NLP and CV modules to prepare data that is needed for automatic feedback.

Current solutions, such as Zoom and Microsoft Teams are difficult to use in a blended (online/offline) teaching environment and designed mainly for meetings and conferences. BlackBoard Collaborate has been widely used for online teaching, however the cost of the software and the complexity of both the setup and UI have been a cause of frustration for many users. Fundamentally these solutions lack accessibility for neurodiverse learners and any form of personalised feedback. NFeedback will therefore be designed as a simple to use interactive cloud-based software service, which captures lectures securely for all students, including feedback content for students and accessibility tools.

It is likely that the implementation of social distancing and new technology will increase overheads significantly for HEIs as they seek to put in place COVID-19 mitigation measures. NFeedback is seeking to solve this problem directly by providing AI supported assessment and feedback systems for students with different backgrounds and learning preferences and to recreate, at least in part, the engagement and experiential component of learning which in-class and on campus courses deliver at an affordable price point.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NATLABS LTD	Deliver a personalized, remote wellbeing program leveraging computer vision and AI to build physical and emotional resilience and aid recovery in vulnerable older adults impacted by COVID-19	£217,500	£174,000
Newcastle University		£69,256	£55,405

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

We aim to develop and deliver a **personalized, remote wellbeing program** leveraging **computer vision** and cutting-edge **emotional AI testing tools** to build physical and emotional resilience and aid recovery in vulnerable older adults impacted by COVID-19.

The motivation for this project is:

1. To solve for adherence among older adults in a socially engaging, safe and supervised setting
2. To develop innovative technologies to effectively deliver at-home wellbeing programs

Older adults aged 60+ are one of the most severely affected groups from COVID-19. This is not just manifested in the death toll or infection rate but also the change in the care they receive, their ability to stay connected, and anxiety of illness and death (source:WHO). "If exercise were a pill, it would be the most cost-effective drug ever invented" however the biggest challenge in prescribing this "pill" is that of adherence.

Our nearest current state-of-the-art is Computer Vision-a field of artificial intelligence that trains computers to interpret and understand the visual world. Its applications range from self-driving cars to medical diagnostics. However, the field of wellbeing has largely remained untouched by this emerging technology. We not only wish to be the early movers in the using Computer vision for pose estimation and body tracking but also effectively test the outcomes in a unique way using emotional AI testing methods.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
YELLOW SUB GEO LTD	Yellow Sub Hydro	£282,495	£172,322

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The post COVID-19 challenge is to build-back-better. Yellow Sub Hydro will instigate a step-change in the way the global mining industry manages our most precious of finite resources - water. United Nations research suggests more than half of the global population will be exposed to severe water scarcity within the next four decades as a result of both climate change and growing demand. We all have a stake in ensuring water is used ethically, responsibly and sustainably.

One of the most water-intensive industries is the metals and mining sector, where no water literally means no business. Mine operators rely on 'water-balance' models to underpin many of their strategic decisions and risk management. These are mathematical representations of the way the water cycles from precipitation through the ground before ultimately leaving the local system via an outflowing river. The current state-of-the-art water-balance modelling typically takes a team of highly specialised hydrogeologists 1-3 years and up to a million dollars for a single mine site (there are tens of thousands of mine sites globally). Our idea is to use digital and machine learning technology, together with proprietary algorithms to reduce the modelling output into near real time, whilst losing none of the accuracy.

Yellow Sub Hydro aims to help mining companies meet their environmental and social obligations (and their licence to operate) at the same time as saving them time and money. The innovation we are delivering will promote circular economy by providing a new landscape for other advances in efficiency and impact reduction from mining operations. For us, driving a sustainability agenda and making an impact socially and environmentally as well as economically has huge appeal, and we envisage this manifesting through driving a step-change in water resource management across a globally important industry.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EGB ENGINEERING CONSULTANTS LTD	Development of a low carbon heating and cooling system with storage and gender based temperature regulation for public and commercial buildings	£218,753	£175,002
Cranfield University		£93,603	£93,603

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*The Challenge and Opportunity:\*\***

The **\*\*Covid-19\*\*** global pandemic increased demand for cooling in patient critical hospital wards, as admissions increased during the early stages of the outbreak. It is also set to increase the heating demand in the winter months to come. According to the BEIS (2019), **\*\*heat is the largest energy-consuming sector\*\*** in the UK at 44% and the single largest contributor to UK emissions. With regard to cooling, UK demand is dominated by offices (65%) and retailers (30%). Air conditioners are expected to become widespread in the future due to expected rising temperatures. The cooling and heating demand of hospitals and retail spaces must be met by a renewable low-carbon solution integrated with energy storage in order to reach net zero by 2050. This has given rise to a UK **\*\*Thermal Energy Storage (TES) market of approximately 20GWh per year until 2050 (BEIS, 2019), which has a value of £800 million per year\*\***. This creates the need for a sustainable, renewable and efficient heating and cooling energy storage system, with optimised controls for public health buildings and retail spaces.

### **\*\*The Solution:\*\***

The solution proposed is **\*\*a low-carbon renewable heating and cooling system\*\*** that utilises **\*\*solar technology\*\***, combined with **\*\*a sustainably highly compact storage module\*\***. The solution will **\*\*provide thermal energy storage for cooling of buildings in the summer, and heating in the winter\*\***. The critical components of the system are powered by solar technology. The power is renewable and the storage module is made from sustainable materials. The system also includes a **\*\*control system utilising Artificial Intelligence (AI) technology\*\***, which efficiently regulates the ambient temperature **\*\*based on the occupancy of men and women\*\***. It uses Machine-Learning (ML) for forecasting and predicting energy demands.

### **\*\*The key aspects of the system are:\*\***

- \* Renewable solar technology that provides power for the components that heat and cool the buildings, based on passive and active setups;
- \* Storage medium stores thermal energy for cooling in the summer and heating for the winter;
- \* Control system that will optimise the output to ensure temperature balance based on the gender occupancy;
- \* The control system ensures that demand is real-time driven, with the ability to forecast and predict future demands.

### **\*\*The benefits offered by the system are:\*\***

- \* Significant reduction in carbon dioxide emissions because the energy source is from the sun;
- \* Significant reduction in the cost of fuel bills related to heating and cooling of public health buildings, retail outlets with scalability to other markets;
- \* This low-carbon heating and cooling solution will reduce the percentage of power demanded from polluting sources, which will have a positive impact on the UK's net zero targets;
- \* The control system that socially considers gender;
- \* The control system is also able to learn and forecast demand based on admittance. This minimises the temperature effects on the virus in Covid-19 wards and public spaces, whilst considering the effect of temperature on the cognitive performance of key workers.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SUNSWAP LTD	Zero Emission Refrigerated Operations (ZERO)	£173,837	£139,070
CENEX (CENTRE OF EXCELLENCE FOR LOW CARBON AND FUEL CELL TECHNOLOGIES)		£45,974	£45,974

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project -- Zero Emission Refrigerated Operations (ZERO) - is a collaboration between Sunswap and Cenex to develop a novel and bespoke electrical architecture for a solar & battery powered Transport Refrigeration Unit (TRU). Cenex will compile energy and operational requirements from customers and feed these into the development process which in turn enables Sunswap to develop a novel electrical system for their TRU.

The majority of TRUs rely on secondary diesel engines to provide power for cooling. They are responsible for large amounts of pollution due to the looser regulations enforced on secondary engines. However, pushed by tightening legislation and corporate social responsibility, customers require a clean and economical alternative to diesel TRUs.

Cenex will facilitate a workshop for a Customers Requirements Group (CRG) and feed the results back to the design process. This will allow customer requirements to be included throughout the project to ensure the final product meets the needs of the industry. A key focus of Cenex's work will be collecting responses from end-users about how they are able to facilitate charging of TRUs at a fleet level. Some customers may have limited grid capacity but need fast charging to reduce fleet downtime. Other customers may have long periods of downtime thus removing the need for fast charging.

Additional analysis of the energy usage across a fleet of electric TRUs and a life-cycle analysis to quantify the benefits of shifting to zero-emissions TRUs will also be provided by Cenex. As they are a research organisation, their findings will be disseminated to fleet operators and made available to benefit the public.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SYMBIOCO LTD	Establishing UK based production via the development of automated production of a novel flushable and biodegradable sanitary towel	£218,597	£174,878

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Polipop is a highly ambitious company focused on the development and production of the first certified flushable and biodegradable sanitary towel. This vital innovation removes the waste disposal burden in relevant toilets. Furthermore, it resolves the problem that around 30% of sanitary products are wrongly flushed down the toilet contributing to the problem of blocked sewers and plastic pollution in our wider ecosystem. Due to the pad being biodegradable they can be harmlessly flushed down the toilet and make a drastic impact on the billions of sanitary products sent to landfill or incineration every year.

This innovative biodegradable sanitary towel does not yet have an established high volume production process so Polipop has started production of the new towel in India and Italy with manual production methods. This approach is not ideal for Polipop, the products have to be shipped all over the world and the Covid-19 pandemic has caused the company severe delays and production complications. The current manual production process also makes the pad expensive, the current pads costs 25 pence each to make which is too expensive for the market.

The aim of this project is to enable Polipop to do the research and development necessary to automate the production of the pad and bring the production to the UK to drastically improve the carbon footprint of the business. Furthermore, by developing specialised high speed machines to produce the pad the team hopes to increase production speed by an order of 2, from 3 pads per minute to 300 pads per minute. This will drastically reduce the cost of the pad to less than 8 pence per unit.

This project fits the The Sustainable Innovation Fund: round 1 competition because:

- \* The business has been severely impacted by the Covid-19 pandemic, this project enables the business to create new opportunities for the company and the UK economy as we recover from the pandemic.
- \* The project makes a significant contribution to climate change and environmental sustainability, at present billions of sanitary products are shipped to waste processing facilities and either burnt or buried in landfill. This results in thousands of tonnes of plastic waste entering our ecosystem every year. This project enables a truly biodegradable approach to be taken that is entirely compatible with current sewage treatment infrastructure.
- \* The project is directly beneficial to marginalised individuals that suffer from stigma, Polipop is targeted for women and incontinence related markets, users such as men and transgender individuals will benefit from improve discretion of a device that can be immediately flushed down the toilet.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SIXFOLD BIOSCIENCE LTD.	RNA nanotechnology for rapid and sustainable preclinical iteration of gene therapeutics	£173,776	£139,021
PHARMIDEX PHARMACEUTICAL SERVICES LIMITED		£139,420	£111,536

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

While traditional pharmaceutical development of small-molecule and protein-based therapeutics can take years to reach patients, a more agile multi-disciplinary approach based on gene therapies has the potential to not only reduce time to market, but also improve therapeutic outcomes and reduce cost. This ability to rapidly engineer gene therapies has been clearly demonstrated during the outbreak of COVID-19, whereby several of the leading SARS-CoV-2 vaccine candidates are utilising mRNA, a form of gene therapy.

However, in order to better respond to rapidly emerging viral infections such as COVID-19 and develop more targeted and personalised approaches for the treatment of cancer and genetic disorders, there is a need for a more adaptable approach to the delivery of gene therapies. Current approaches for the delivery of gene therapies, include conjugation, lipid nanoparticles or viral vectors. However, the exploitation of these delivery technologies for diverse indications has been impeded by the limited targeting specificity of diseased cells, toxicity and/or the lengthy and expensive manufacturing process.

Sixfold's patented Programmable Oligonucleotide Delivery System (PODS) has been engineered as a rapidly scalable, non-toxic and targeted approach for the delivery of gene therapies. The technology has been validated in vitro and in vivo mammalian systems, showing favourable safety and biodistribution. The technology is unique in that it allows gene therapies to be simply 'clicked' onto their PODS enabling rapid iteration and short design-to-manufacture lead times.

The **two objectives** of this project are to introduce a more **rapid development cycle** for fast iteration and introduce a significantly more **sustainable development process** from manufacturing through to testing. The innovative approach outlined in this project seeks to reduce the lead times from the current 24 weeks to 6 weeks, which will allow for a more rapid response to emerging infectious diseases AND the parallel development of gene therapeutics across multiple disease indications. This project will focus on doing this in a more environmentally sustainable way. By partnering with Pharmidex, a leading UK CRO offering in silico and in vivo services, we can reduce our wet lab work and limit the use of animals to only essential studies by using their in silico methodologies for candidate selection and their cascade approach to funnel the best candidates into efficacy testing. Sixfold will also overhaul the manufacturing process reducing reagent consumption and waste, and increasing yield, as well as taking on a more high-throughput approach to in vitro testing which will further reduce plastic waste and the use of animal-derived reagents.

The success of this project will make Sixfold world leaders in drug delivery system development times through the introduction of a more agile development methodology into their process and allow Pharmidex to develop a more comprehensive suite of in vivo experimentation services including an expansion into oligonucleotide-based therapeutics.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Lambda Energy Ltd	Lambda Energy QD retrofit solution for improved photovoltaic efficiency	£218,750	£175,000
University of Bath		£93,422	£93,422

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Governments and companies across the globe have issued numerous pledges to reach net-zero CO2 emissions in the coming decades. However, the long term trends of energy consumption are clear, and the US Energy Information Administration predicts that global energy consumption will double by 2050. Currently, global primary energy sources are more than three quarters from fossil fuels. Meeting these pledges, and preventing catastrophic climate change, therefore requires the development of clean energy technologies.

Lambda Energy is a clean energy technology company that exploits the unique optical properties of semiconductor quantum dots to improve the efficiency of silicon solar panels (which account for approximately 95% of installed solar power). Silicon solar panels perform poorly at short wavelengths (i.e., UV, and to some extent also blue) because short-wavelength light is very strongly absorbed by silicon, and so the electron-hole pairs that are generated by the absorption of light are not created in the optimal region of the solar cells, rather at the front surface.

The idea of Lambda Energy's technology is that we absorb these shorter wavelengths using quantum dots before they reach the solar cell itself, and re-emit the light at longer wavelengths (i.e., red) where silicon solar cells exhibit optimal operation, by placing a layer of quantum dots at the surface of the solar panel. This approach is termed luminescent downshifting (LDS).

The idea is not new, however, and in fact the effect was first demonstrated in the 1970s. Despite promising results, however, it has not yet been commercialised. The reasons for this relate to the difficulties of creating stable dispersions of materials that have suitable optical properties, and can survive being exposed to strong sunlight for 25 years or so (the expected lifetime of a solar panel), and moreover doing so in a cost-effective manner.

Thanks to recent developments in nanomaterials processing, we believe it is now feasible to commercialise this technology. This project will develop a prototype LDS film that has the required optical properties to enhance the efficiency of silicon solar panels, can withstand the UV exposure that a solar panel is subjected to, and is suitable for application to existing solar panel arrays that are already installed. This will position us to carry out trials of the technology on existing solar panel arrays that are already installed, with the aim of increasing the power output of these installations by 10%.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HUMMINGBIRD TECHNOLOGIES LIMITED	Sus-Ag Project	£211,828	£169,462
LINKING ENVIRONMENT AND FARMING		£61,815	£49,452
SUSTAINABLE FOOD TRUST		£39,836	£31,869

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The Sustainable Agriculture Project or Sus-Ag is a collaboration between LEAF, Sustainable Food Trust and Hummingbird Technologies to create a new digital self-assessment tool for measuring on-farm sustainability, using LEAF's Integrated Farm Management system and the SFT's harmonised framework of metrics for data collection. Hummingbird will be the technical lead on the project and will construct the tool, prioritising three key elements in the process:

1. Automation / integration - Linking the user's existing Farm Management Software (FMS) to the tool. This avoids manual inputs and the duplication of data collection and storage. A wealth of data required for sustainability assessments already sits in a digital form. Therefore building a tool that can automatically 'pull' this information is a vital piece in making the user experience easier and therefore driving adoption.
2. Output Display - Creating a dashboard for the outputs of the assessment is key in driving industry adoption and ensuring transparency and ease of interpretation. Using different tools to visualise the results allows the users to intuitively understand where improvements can be made. Hummingbird also plans to link the survey to field and farm geospatial data to use in the farm benchmarking tool.
3. Interrogation - Using historical sustainability data, Hummingbird will build a layer of predictive modelling that lies behind the tool. This will allow users to model 'what if' scenarios and predict the likely outcomes of changes, thus allowing them to take more of an active management approach to sustainability.

The tool will be designed to drive market adoption and offer a contemporary user experience that prioritises technology functionality and offers increased supply chain transparency. Current versions of sustainability self-assessments focus on farmers and retailers, the consortium's desire is to increase that scope to other stakeholders as highlighted below.

### Our Users

1. Farmers -- are increasingly looking to farm more sustainably using existing data to drive continuous improvement and evidence their performance. Such a platform would support improved productivity as well as create a visual planning support document to enable farmers to hone their efficiency, plans and environmental performance.
2. Asset managers and Land-owners -- concerned about maintaining and enhancing the value of their assets and want to assess their farms and the performance of their tenants.
3. Insurance Companies and Banks -- concerned about understanding the profile of risk associated with farm operations.
4. Food manufacturing companies and Retailers -- wishing to protect their relationship (brand value) and give assurance of 'best practice' in procurement to consumers.
5. Government and Regulators -- seeking to fulfil policy objectives, evidencing 'public money for public goods', meeting Carbon Net Zero targets, SDGs and so forth.
6. Other Corporates -- wishing to be associated with sustainable farming to demonstrate the delivery of their environmental and social goals.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AMPHIBIO LTD	Development of a sustainable, recyclable, and circular Waterproof Breathable Textile	£228,558	£173,704

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Waterproof breathable garments typically consist of a laminated multi-layer construction, comprising a durable water-repellent-coated outer shell textile, a waterproof breathable membrane, and a lining material. These fabrics are bonded together to form the multi-layer structure, with pieces of fabric sewn together to produce garments. To prevent leaks along seams, they are sealed with tape. This approach delivers high-performance apparel, but is limited by three key drawbacks:

- 1\.\*\*Use of environmentally concerning chemicals.\*\* High-performance membranes are typically manufactured from expanded polytetrafluoroethylene (ePTFE; Gore-Tex), which is inherently waterproof, windproof, and chemically inert. However, brands are under increasing consumer pressure to remove PFCs (per- and poly-fluorinated chemicals), since these harmful chemicals persist and bioaccumulate when released in the environment (OECD\2013).
- 2\.\*\*No sustainable end-of-life solutions.\*\* Multi-material textiles cannot be separated and face either landfill or incineration at end-of-life. In landfill, plastics break down slowly over time to produce microplastics, which are harmful and persist in the environment (OECD\2013). During incineration, PTFE membranes used in Waterproof Breathable Textiles (WBTs) have been shown to produce highly toxic hydrofluoric acid, which is converted to fluorspar in a typical municipal incinerator (Aleksandrov\et\\_al\2019).
- 3\.\*\*Requirement for cheap labour.\*\* High manual effort associated with garment production means manufacture requires large numbers of fabric cutters and sewing machine operators. China accounts for around 38% by value of the world's textile exports (WTO\2019). The recent lockdown in Leicester has brought the condition of textile workers closer to home to the fore, with workers reportedly receiving far below UK minimum wage (as little as £3.50/hour) and working in unsafe conditions, with little or no social distancing during lockdown (The\\_Sunday\\_Times\2020).

Amphibio is a London-based micro-SME founded in November 2018 by Jun Kamei, a designer and material scientist exploring potential commercial applications of wearable superhydrophobic porous membranes. With Innovate UK support, we will develop an innovative WBT that delivers on the triple bottom line of three Ps: People, Planet, and Profit:

- 1\.\*\*People.\*\* We will develop an automated whole garment manufacturing process using digital 3D knitting, which removes the requirement for cheap labour. Uniqlo launched a 3D knitted collection in 2017 and is now using 3D knitting to produce seamless cotton jumpers. However, 3D knitting has not yet been applied to produce waterproof garments, since existing multi-layer WBTs require traditional cut-and-sew production. Since we produce our WBT from a single material, we can use digital 3D knitting to produce high-performance seamless garments. SHIMA SEIKI's WHOLEGARMENT Mach2XS knitting machine can knit a custom jacket in 90 minutes, delivering an annual production capacity of 5,000+ jackets from a single machine(Los\\_Angeles\\_Times\2017).
- 2\.\*\*Planet.\*\* Our mono-material WBT will be 100% recyclable and PFC-free. In addition, 3D knitting is zero waste. Cut-and-sew production typically leaves about one fifth of fabric on the cutting room floor (EPRS\2019).
- 3\.\*\*Profit.\*\* Working with leading British clothing brands, our innovative material will help organisations deliver on their sustainability targets, supporting the UK clothing industry to 'build back better' post-COVID-19\.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CROWNCRUISER MOTORS LTD	The RAPTURE E-Bike	£174,962	£139,970

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project shall launch CrownCruiser Motors Ltd as a large scale ebike manufacturer. With the support of this grant, CrownCruiser has a **financial plan** that will establish them and **provide prolonged success**.

We teamed up with PES Performance Ltd in 2019 to design a bike, the Rapture, that is a desirable alternative to motorised transport. **The Rapture turns heads**, its styling fits a modern futuristic city that has said goodbye to dirty congestion. Beneath its looks it is also a highly functional, **technologically advanced vehicle**. We have ignored the traditional double-diamond frame design and adopted a carbon-fibre monocoque with ample spacing for a large battery and numerous technological conveniences.

As well as the Rapture, we have also designed a Swap and Go battery station. We plan on locating stations around cities so that users can return to **maximum charge in 12 seconds**.

With help from the Sheffield City Region Local Enterprise Partnership we want to set up an **Operations and Assembly Centre in Sheffield** to build, promote and sell the Rapture. This grant will allow us to commission the site and employ and train four technicians.

We have a carbon fibre lay up facility under construction in Nigeria that shall produce the Rapture frames and ship them to Sheffield. This will differentiate our business from **the rest of the market that rely heavily on China**. This project will support **UK manufacturing and innovation in the composite vehicle market**. PES Performance Ltd shall complete the design of the Rapture and continue to support CrownCruiser as we innovate. We shall use a UK manufacturer to produce the tooling, the first five prototype bikes and train staff in Nigeria. This will strengthen trade between the UK and Nigeria and provide a **low cost development route for our UK partner companies** that is outside China.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LYNAM PHARMA LIMITED	EasiBioArmour. Development and production of a surgical gown with enhanced antiviral and antibacterial properties which is bio-based and biodegradable	£112,759	£90,207
NONWOVENS INNOVATION & RESEARCH INSTITUTE LIMITED		£120,089	£96,071

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The spread of infectious diseases continues to grow worldwide, with increased risks of zoonotic based pathogens transferring to humans. The recent global pandemic of nCOVID-19 has led to supply chain challenges for personal protective equipment (PPE) in particular surgical gowns leading to NHS and other healthcare staff having insufficient protective equipment which is comfortable, provides an effective antiviral barrier, and at an affordable cost to the NHS and other healthcare institutions.

The majority of gowns used in hospitals and clinic settings are designed to be discarded after single use. These are produced using petrochemical based synthetic fibres (eg. polypropylene, polyester and polyethylene). This led to the idea of producing a surgical gown which has enhanced antiviral/antibacterial properties and is produced using bio-based and biodegradable sustainable material.

Lynam Pharma Limited is working with the Nonwovens Innovation and Research Institute to develop a surgical gown which has enhanced antiviral and antibacterial properties using bio-based and biodegradable sustainable materials.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
3D METAL PRINTING LTD	TOKA Digital Health (TOKA portal)	£216,321	£173,057
University of Bath		£40,923	£40,923

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

3D Metal Printing (3D-MP) develop solutions for public health improvements by continually innovating and improving our product range to deliver superior patient outcomes. We additively manufacture a range of custom-made medical devices and digital applications for 3D surgical planning.

Additive manufacturing is an innovative technology that works by fusing together very fine layers of metal powder using a laser beam. This process can produce complex geometries which might not have been possible using conventional techniques; the 'unsintered' or loose material is recycled for future use, making it both economical and environmentally friendly.

3DMP are developing a 3D printed orthopaedic implant (TOKA) as a precision engineered personalised solution to knee pain, particularly designed for young patients suffering from knee arthritis but not yet suitable for partial or total Knee-Replacement. High-Tibial-Osteotomy (HTO) is a surgical treatment option for those patients, preserving the native joint by re-aligning the tibia and the weight / forces distribution, often the cause of major pain. Current market solutions are very challenging, present several complications and cause patients' soft tissue irritation due to the generic nature of the plate. TOKA removes those complexities providing surgeons with an intuitive 3D planning environment to achieve precise intervention, optimum knee alignment with minimal risks for patients and personalised prosthesis for superior comfort and fast recovery.

Due to COVID-19, the majority of routine surgical procedures have been suspended. Lifting restrictions and returning to surgery, however, places a significant burden on the NHS and risks an increase in COVID infections. Demand for elective joint replacement surgery for osteoarthritis is set to double by 2030. In the UK there are currently >130,000 knee surgeries annually. Surgeons and patients need to interact in new ways to enable procedures to be delivered without compromising NHS workers and wider societal immunity. Consequently, the need for innovative, enabling digital technologies has accelerated dramatically.

Our project will integrate TOKA's existing digital products (Surgical Simulator, VR training and Patient App) and surgical hardware to create an interactive platform supporting TOKA adoption in the NHS. TOKA Portal will provide surgeons, patients and NHS procurement teams a single point of interaction enabling communication, collaborative design, procurement, scheduling and post-operative monitoring.

This will have significant positive impacts for the NHS in sustainably recovering from COVID-19, (enabling remote consultations minimising infection risk; reducing hospital stays; supporting the NHS digital transformation; £40M. annual savings in delivering HTO operations), patients (better clinical outcomes; reduced inpatient time; return to active lifestyles with health and wellbeing benefits e.g. preventing the onset of obesity or diabetes) and the environment (reduced transport emissions through remote consultations; reductions in energy and waste by reducing overnight hospital stays).

The project is core to 3DMP's mission to restore patients' wellbeing in an efficient healthcare system and will initially create 3 new jobs building on previously funded public research supporting NHS delivery of HTO operations, more cost effectively and sustainably, enabling early stage knee osteoarthritis sufferers to return to work and life more active lifestyles.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Rheality	Rheality - COVID-19 Challenge	£174,994	£139,995

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Rheality Ltd was incorporated on 14th January 2020 and is a spin-out from the University of Birmingham. The company's innovation is based on the technology arising from the work of Dr Federico Alberini, in the School of Chemical Engineering at the University of Birmingham. Rheality aims to demonstrate, in a relevant environment, a cost-effective, real-time, in-line rheology/liquid fingerprint measurement device to monitor state of materials flowing through pipelines at large volumes even at high speeds improving quality & process control. The technology and its process has been patented. Rheality has secured an exclusive option from the University of Birmingham to exclusive licence of the Intellectual Property, upon receiving IUK funds. Last March the company was awarded £300,000 by IUK as part of the ICURe programme.

We are confident that Rheality's technology meets an urgent market need. Fluid state knowledge represents a major challenge and significant cost to a variety of industries, including but not limited to FMCG, Chemicals, Oil&Gas and Pharmaceutical. The measurement of intermediate and/or final product state is fundamental to process & quality control as the performance of a finished product is directly linked to its product state during processing. Moreover a tight control of the process will enable a drastic reduction in waste and a fast integration, in existing plants, of new formulations. This is, currently, a key challenge for industry which needs to control the consistency of their product in-line after the introduction of greener chemicals in the existing formulations. This is not possible without a technology that enables the direct monitoring of the process like Rheality does. Rheology provides direct measurements of product state and it's the ideal gold standard to ensure the desired product performance/quality.

The technology is enabled through a novel passive acoustic approach which reliably and robustly predicts rheological properties of fluids. Our novel approach utilises an external piezo-sensor to measure passive signals within the fluid to create an acoustic fingerprint. Machine-learning algorithms then extrapolate the rheology based on a correlation between the observed frequency spectra and those stored in a database for fluids of known rheology.

The key innovation of this technology is through the provision of a minimally invasive sensor system on a proprietary pipe segment to measure the real-time rheological properties of all types of fluids in a format compatible with large-scale manufacturing. We use passive acoustic emission sensors that until now have only been used for structural surveillance, but not to monitor fluid flows. We have developed unique software to interpret acoustic spectra with rapid de-noising and feature selection elements using machine learning algorithms that can be programmed into a basic data processing unit. To our knowledge there is nothing similar to our technology in development and we are driving innovation in this area.

The initial target customers are FMCG manufacturers (batch/continuous processing), however with this specific project we want to expand into the Petrochemical sector, in particular in paints and catalyst slurry manufacture.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SMART POWER NETWORKS LTD.	INFINITE: Identifying & releasiNg Flexibility IN IndusTrial dEmand'	£171,532	£137,226
DECENTRALISED ENERGY SOLUTIONS LTD		£173,250	£138,600
EDF ENERGY R&D UK CENTRE LIMITED		£61,220	£48,976
SP MANWEB PLC		£4,627	£0

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

A major theme of the UK's low-carbon energy transition is the increased need for flexibility across electricity networks. Flexibility has been proven to be a 'powerful toolkit' for system operators across multiple levels and scales, providing enhanced capabilities to the operators, introducing a direct alternative to capital-intensive network reinforcements and bringing about UK-wide economic and environmental benefits. The COVID-19 pandemic and the consequent shift in day-to-day life activities have revealed the vulnerability of the electricity sector, driven by falling demand, price reduction, sudden halt of investments and surplus of renewable generation, leading to new challenges in power networks. In this setting, the importance for additional actions has been rendered imperative, in order to address those issues and mitigate the COVID-19 effects, while maintaining minimum capital investments.

The 'Identifying & releasing flexibility in industrial demand' (INFINITE) Project will create innovative technologies enabling the facilitation of demand flexibility from the industrial sector. The technology put forward through this project will demonstrate the capability of the UK industrial sector to support demand flexibility. The proposed industrial Flexibility Exchange Service (iFES) hosted within the Flexibility Exchange Platform (FXP) bears capabilities far beyond the present market, as it creates the conditions necessary for industrial consumers to trade flexibility contracts, peer-to-peer energy and flexibility trading with full transparency, automatic matching, and without third-party intervention. The offline assessment, achieved in the initial stages, through Techno-economic Evaluation DSR tool will allow the consortium shape appropriate flexibility services and quantify their economic benefit prior to demonstrating it through the FXP.

INFINITE Project is about commercially-driven R&D. It benefits from real-world track record in developing smart energy networks, though the enhancement of the existing FXP and DSR tool and will display unprecedented capabilities from technical implementation up to market realisation.

The objectives of the consortium are presented hereafter:

- \* Identification and characterisation of the industrial demand flexibility potential in the UK context, tailored for the UK electricity and industrial sector in particular.
- \* Development of a methodology for optimal economic exploitation of the identified flexibility.
- \* Validation of the technical capability, including appropriate control features, of industrial plants to provide a diverse portfolio of flexibility services.

The project is about tangible benefits to industrial consumers, taxpayers and electricity system operators:

- \* New flexibility players: industrial consumers of all sizes, technologies and associated with different manufacturing processes able to trade flexible energy services.
- \* New revenue streams: access for participants to a widening spread of local and national energy market segments, in which new revenues streams are emerging steadily. COVID-19 is anticipated to increase uncertainty and the need for more flexibility, potentially further enlarging these markets.
- \* Avoidance of network reinforcements: participation of industrial consumers in the flexibility market, minimising the need for additional capital expenditure to mitigate network stress.
- \* More clean energy, leading to improved local air quality, and reduced emissions of greenhouse gases through increased utilisation of renewable generation.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
B.P.P. TECHNICAL SERVICES LIMITED	COVID-19 Risk Reduction for Confined Environments	£210,060	£168,048

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The control and prevention of transmissible infections has been a constant in human affairs for a very long time. However, since the availability of vaccines for common diseases in the nineteenth century, the importance of maintaining infection control techniques in the community has declined somewhat. The emergence of COVID-19 as a serious respiratory illness with an airborne transmission mechanism has exposed this shortcoming; particularly for gatherings in confined environments.

The challenge of dealing with these environments will be addressed by bringing to market two linked innovations that will deliver applicable tools in the short term. The two key innovations are: (1) to assemble, integrate and deploy the latest computational science and statistical processing to deliver a quantified risk reduction outcome for all mitigation measures and (2) to incorporate and quantify the effects of active means for reducing infection potential and transmission by virucide and aerosol absorption devices.

It is intended that the output from this work will be comprehensive guidance documents with extensive graphics and supporting software. The graphics will be directed at ensuring that lay persons that are not technically or medically qualified can grasp the key outcomes of the work. The supporting software will be user friendly and with the same objective.

A further need addressed by this work is to provide tools that will reduce infection risk in environments where there are elderly people and members of ethnic minorities that are known to be vulnerable to COVID-19. This will have a proportionately higher impact on the health and well being of such groups within the community. Another of the wider needs met by this proposed innovation is to increase the profile generally of infection management in confined environments and make such quantified risk management the 'new-normal'.

The innovations in this project have been developed by BPP Technical Services Ltd ([\[www.bpp-tech.com\]\[0\]](http://www.bpp-tech.com)); a technology and product development company that has the staff expertise, computational tools and experience in developing clean technology services and products.

[0]: <http://www.bpp-tech.com/>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FLEXI-HEX LTD	Flexi-Hex Consumer Electronics Sustainable Packaging	£105,083	£84,066

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Flexi-Hex is an innovative new sustainable packaging system for Consumer Electronics created in response to the increasing number of e-commerce direct-to-consumer sales and the demand by Consumer Electronic companies to improve their environmental credentials by going 'plastic free' in terms of packaging. Flexi-Hex is made from recycled paper and cardboard yet is surprisingly strong and durable. The unique honeycomb design gives the packaging high compression resistance and the unique cellular structure of Flexi-Hex allows flexibility to fit irregular shapes and sizes. The honeycomb geometry is unique in that it expands to create a sleeve 35 times wider than its compressed form. Flexi-hex is also lightweight and in its compressed form takes up little storage space. The system's flexibility is pragmatic for compact lightweight portability. With public awareness around single-use plastics and the devastating effect on the marine environment at an all time high, developing a sustainable plastic free packaging system for Consumer Electronics will offer a solution to reduce the considerable amount of plastic waste companies generate and so can significantly reduce their environmental footprint.

Flexi-Hex has already developed a packaging solution for Bottles which is in operation today with many leading drinks suppliers and wholesalers.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SMART VILLAGES RESEARCH GROUP LTD	Sustainable Offgrid EdTech for Education Continuity and Outcomes in the Developing World	£138,940	£111,152

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

\_SVRG develops and supplies technology solutions and business models for cross-cutting integrated rural development, particularly in sub-Saharan Africa. The strength and USP of SVRG's solutions is this broad integrated approach, that works with communities to develop a systems approach to simultaneously address their main needs and priorities, usually catalysed by access to energy, ICT, and enhanced agricultural productivity.\_

\_A consistent priority raised by our client communities is improved access to education. But whereas there are any number of technologies to use when integrating energy access, or water pumping, or agricultural value addition, there are no generally available technologies for basic off-grid, off-internet, language- and curriculum-independent education support.\_

\_We in the UK are of course familiar with any number of such systems - from BBC Bitesize, to Khan Academy, White Rose Maths, and any number of basic advertising- or in-app-sales-driven basic numeracy and literacy apps for smartphones and tablets. And we have become particularly familiar with the utility and power of all of these in maintaining children's learning and engagement with education during the COVID lockdown and closure of schools.\_

\_But the communities we work with, in the developing world, face multiple challenges in this context. Existing educational material (for example free apps, or educational content environments like Khan Academy) is rarely tailored to their language and curriculum needs, and requires access to good internet connections in order to work. Consequently few schools, especially poorly-resourced rural schools, use any EdTech to support teachers' educational efforts or pupils' learning outcomes. And when, as now in the face of a global pandemic, schools close the result is that education stops. There is no encouragement for, or facilities or systems to even permit, remote/home learning by students. And the consequence is that many will fall further behind in school or may not even return to school - especially girls whose parents may have been reluctant to send them in the first place.\_

\_In this project, we will develop simple educational content - based on teacher experience - that is language and curriculum neutral and can support both preschool, classroom and home learning. And more importantly, we will develop a localised solution which enables this content to be accessed and disseminated without the need for individual devices to have internet connections. This will then form the basis of an educational component in our Smart Villages model which our client communities and schools have been asking for, and which can then be progressively tailored to meet individual local curriculum needs, from a standard core functionality. Furthermore, this system will also enable us to share broader "life skills" information which curricula and teaching in developing countries rarely cover, such as COVID awareness, climate change and environmental stewardship material, in consultation with local educators and experts.\_

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OXFORD SUSTAINABLE FUELS LIMITED	Continuous chemical purification process prototype for plastic film derived pyrolysis oil	£132,582	£106,066

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Plastic films represent a significant challenge to the waste and recycling industry. At a time when awareness of plastic pollution crisis has become widespread there are still no viable processes for mixed packaging films.

Current recycling methods are limited by the presence of composite materials, additives, difficult to separate polymer types and contamination in the form of food or other organic or inorganic material. The recycling of such films is not economically viable, and the majority are sent to incineration.

During Covid19 the use of such packaging has increased, with some polyethylene suppliers reporting 50% year on year growth. At the same time, oil prices have fallen lowering the value of all plastics including recycled material.

At Oxford Sustainable Fuels we have developed new chemical separation and purification methods to address key challenges of existing processing technologies. The application of these new methods will significantly increase the value generated through recycling mixed plastics films to create a viable industrial process.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DARWIN EVOLUTION TECHNOLOGIES LTD	DECAF - Decarbonising E-Commerce delivery And Fulfilment	£218,749	£174,999

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*Covid-19, the surge in e-commerce and sustainability\*\***

Covid-19 impacted our world on multiple dimensions: it accelerated the adoption of e-commerce by both retailers and consumers, with a lot of businesses having to reinvent themselves by moving into an online proposition. Covid-19 pushed consumers to purchase online more than ever. This inevitable shift will negatively impact the environment in terms of carbon footprint and waste, driven by excessive packaging and last mile deliveries. Covid-19 also impacted the way we see our world, and sustainability has become even more important for people, who are increasingly worried about the impact we as humans are having on the environment. This trend is also making logistics companies think and develop greener ways of doing e-commerce deliveries.

### **\*\*The failure of small and medium enterprises to have access to green e-commerce logistics\*\***

A big part of the problem is that green e-commerce logistics solutions are not available for small and medium enterprises (SME). Green logistics solutions are typically designed and made for large enterprises with a lot of resources and large volumes. This, despite the fact that SME e-commerce retailers already constitute more than a third of e-commerce sales in the UK and are growing more than three times faster (36% per annum) compared to large e-commerce retailers (11% per annum). These SME e-commerce retailers do not have the resources nor the technical expertise to set up their own green, environmentally friendly logistics for their customers and 57% of SME retailers want advice on how to be more sustainable.

### **\*\*A greener approach to e-commerce\*\***

We at Bezos.ai believe that e-commerce should be done in a sustainable way. Bezos.ai's vision is to "Deliver Happiness" to everyone involved in our ecosystem. Bezos.ai is on a mission to help SME e-commerce retailers get access to green e-commerce logistics. We know that consumers have a willingness to pay a premium to reduce the environmental impact of their online purchases. Our long term goal is that the cost of fulfilling and delivering an e-commerce order in a green and sustainable way should be the same as the current "non-green" cost.

To decarbonise e-commerce fulfilment and last-mile delivery, Bezos.ai will create a novel technology add-on to its existing Fulfilment-as-a-Service (FaaS) platform, making it easy for SME e-commerce retailers to offer an option of green fulfilment and delivery to their customers. Bezos.ai will combine its existing FaaS technology with the innovative technology add-on, to make green e-commerce logistics accessible for SME retailers. The technology will focus on the reduction of the carbon footprint of e-commerce packaging and last mile deliveries. For the first time, SME retailers will have access to green fulfilment and zero-emissions last mile delivery capabilities, with one simple integration, without the need for complicated logistics or technical expertise, nor the need to invest massive amounts of capital.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ABUNDANCE INVESTMENT LTD	Climate Community Municipal Bonds: Accelerating their Potential	£263,450	£173,877

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The C19 pandemic has carved a hole in the budgets of councils, leaving them with impossible decisions on what to prioritise. And it has put a significant dent in their scope to press ahead on the climate emergency which remains no less pressing. Two thirds of councils have declared a climate emergency, but even before the pandemic, they would not have reached their local NetZero targets without new sources of borrowing, non-repayable capital and the active participation of residents. The dent to their resources makes this need ever more pressing.

Launched in partnership with West Berkshire, Warrington and Leeds City Council, Climate Community Municipal Bonds (CMB) are a response to this challenge. A Climate CMB is a bond issued by a council to residents (and general public) investors via a crowdfunding platform. It enables anyone to lend from £5 to help councils deliver their NetZero plans while offering a new low risk investment option. For councils, it creates a competitive source of capital which builds engagement and a collective sense of purpose within the community.

CMBs were developed through research, culminating in the 2019 Financing for Society (FfS) report led by University of Leeds, 3 law firms, KPMG and BDO, working alongside us. As well as competitive capital, the research project showed that CMBs have potential to build trust and engagement between councils and the public. UK investors hold £3.89 trillion of investable wealth and a recent demographically representative survey of 2000 adults, showed that 73% of them support the idea. Councils borrow on average £5bn a year, increasingly to fund NetZero plans.

### \*\*Innovation\*\*

The grant will fast track the research, design and delivery of further innovations identified through recent consumer research as offering the potential to increase CMBs attractiveness and social impact.

The research was reviewed and published in a Place Climate Action Network report in June 2020 and:

\\* Confirmed the potential for CMBs to enhance council transparency and thereby enhance local networks of trust and engagement with council plans. As the C19 lock down demonstrated trust and engagement are essential for maintaining collective action. The grant will fund the R&D to create the additional innovations enabling CMB to deliver on this promise.

\\* Identified a desire by respondents to donate interest earned back to the council to support hard to fund elements of NetZero plans. The grant will fund the R&D required to optimise the delivery of this innovative way for councils to access non repayable capital.

\\* Identified CMB secondary markets as a barrier to scale, the grant would fund R&D to deliver an innovative scalable secondary market.

Combining investment, community engagement and philanthropy within the context of local government finance is a global first, but one that transforms council resident relations and can accelerate NetZero delivery.

Abundance the UK's first regulated crowdfunding platform has raised £100m to date and has a senior team with over 100 years of combined innovation and

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

financial services expertise. University of Leeds are a project partner to assess the impact of the innovations.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OCEANIUM LTD	KELP UK: From farm to factory - Accelerating UK seaweed industry to generate sustainable opportunities for the coastal economy	£216,931	£173,545
EFFICIENCY TECHNOLOGIES LIMITED		£164,130	£131,304
KELPCROFTING LTD		£92,534	£74,027

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The seaweed value chain offers huge growth potential for UK coastal communities post COVID-19 whilst addressing the climate emergency. Farmed seaweed is a sustainable biomass source with applications in food & nutrition, packaging materials, chemicals and pharmaceuticals. Seaweed farms sequester carbon and absorb excess nutrients, bioremediating ocean acidification and eutrophication, while providing alternative livelihoods for fishermen and creating jobs across the value chain. This project will demonstrate the economic and environmental potential of the farmed seaweed value chain at scale by developing efficient, scalable and sustainable seaweed farming, harvesting and biorefinery process for converting seaweed into value-added food (protein & fibre), nutrition (fucoidan, beta-glucan, vitamins & minerals), and home-compostable biopackaging products.

The project is a collaboration between KelpCrofting, a seaweed farming company based on the Isle of Skye, Efficiency Technologies, a bio-process equipment innovation company based in Milton Keynes, and Oceanium, a seaweed processing company based in Oban. This collaborative project seeks to apply innovation across the value chain to demonstrate its potential at scale. Project success will catalyse investment in UK seaweed farming and coastal biorefineries. By demonstrating the farmed seaweed value chain at scale, we will:

- catalyse growth of nascent UK sustainable seaweed farming industry to support UK coastal communities post COVID-19
- improve the future resilience of UK fisheries and aquaculture sectors
- support UK to meet climate targets
- reduce UK reliance on fossil fuels and imports
- enhance marine biodiversity
- tackle plastic-waste crisis & support packaging industry to transition to circular economy
- support UK transition to plant-based foods

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DRY ICE SCOTLAND LIMITED	A novel carbon capture and dry ice manufacturing project to save customers £40,000 per year on average.	£187,634	£150,107

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Dry-Ice Scotland was founded by Ed Nimmons and Richard Nimmons. Dry-Ice Scotland aims to provide a solution that will address the limited availability of dry ice in the UK, an essential commodity for the healthcare industry, drug-discovery companies, and food companies across the UK. COVID-19 has further driven demand for dry ice across all sectors, which is predicted to continue to increase post-COVID-19. This will enable dry ice to be made in a cost-effective and carbon-neutral manner. Dry-Ice Scotland aims to reduce the cost of dry ice by up to 50% providing an affordable source of dry ice and, ultimately, improving the economics of drug development and food delivery.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOURPLUS IMMERSIVE LTD	An Immersive Technology Platform for Science Education	£162,631	£130,105
Aston University		£65,776	£65,776
HOLOSPHERE LIMITED		£82,579	£66,063

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project will deliver new technology for training university science students. The technology is based on virtual reality that immerses students in a simulation of a 'real-life' environment even if they are sitting in their own living room. The technology will enable deeper learning than current teaching practices allow because currently students learn through lectures, presentations and practical classes that take place in defined time slots and do not allow students to learn at their own pace.

With our virtual reality training platform, it will be possible for students to learn at their own pace and in a place of their choosing, meaning they will not have to travel to the university for a given time and day. This remote, immersive learning is particularly appealing in the aftermath of COVID-19, as university closures have prevented large numbers of students from being able to undertake the necessary laboratory training to gain the skills they need for future employment after graduation.

A VR platform that allows students to train at their own pace and in flexible locations will increase accessibility and inclusion because students do not all learn at the same pace and some do not naturally thrive with conventional book learning approaches. Other students have external responsibilities such as caring for family or undertaking paid work to support their studies. Therefore, flexible and remote learning that incorporates immersive, 'hands-on' experience will have enormous appeal for universities who want to increase the accessibility of their courses to a wider market. Moreover, the accompanying reduction in laboratory waste due to moving laboratory training into VR will have a positive impact on the environment and help universities to reduce their environmental impact.

Our project will bring together two West Midlands companies (FourPlus and Holosphere) and an academic partner (Aston University) to design and build a prototype VR training platform for bioscience students. Our team includes a talented 3D artist, software developers, instructional designer and academics who will collectively work to build and stress test the software. The prototype will then be tested on students to assess the user experience of VR and benefit on learning. We will write up the results of the study and also turn the prototype into a first-generation product so that universities throughout the UK can start benefitting from the VR platform. In addition to building VR training that can be experienced via a headset, we will also build a laptop-accessible alternative format of the training to increase accessibility even further.

This exciting project will help strengthen UK's position as a leading nation in the development of innovative education technologies.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOTENIX LIMITED	ALPHA Agriculture - Cloud integrated cameras for agriculture	£154,329	£123,463

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

This project entails the construction of the ALPHA AI cloud platform for the precision agriculture sector. FOTENIX currently produces multispectral 3D cameras with particular use cases, e.g. disease detection in strawberries. The products are developed in conjunction with machinery/robotics providers and trained on trial data before being deployed in the field. This project focusses on a cloud architecture to sit between the camera systems and the customer's dashboard, which will enable an additional revenue stream that supports the translation of FOTENIX's software and data analytics capabilities to its customers (machinery) and end-users (growers).

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ELIXIVITY LTD	Project Libra: Empowering Inclusion and Diversity for UK economy recovery	£218,540	£174,832

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Diverse and inclusive companies report higher innovation, productivity and employment engagement leading to increased business productivity. However, COVID-19 has had a drastic impact on workplace D&I strategies and ultimately the UK economy. Mortality rates, socioeconomic factors such as employment have all been affected with minority groups, women, younger individuals and lower paid jobs being the most negatively impacted. A recent [Deloitte study][0] showed that bias and xenophobia has also risen with drastic impact on workplace inclusion.

COVID-19's economic repercussions have led to businesses being unable to prioritise Diversity & Inclusion (D&I) initiatives due to insufficient best practices, ineffective existing strategies with tangible impact and a lack of resources. Deprioritising D&I is not a conscious decision as businesses require actionable insights to better understand the effects of D&I strategies on its workforce and therefore business performance.

Project Libra (PL) aims to support the recovery and growth of the UK economy by determining optimal D&I strategies via its AI-driven, cloud based, SaaS solution. Companies urgently need integrated digital solutions, accessible remotely due to the current climate, in order to optimise D&I strategies. This will help companies and the public overall to better understand its workforces, maximise business productivity, talent engagement and create new opportunities for employment.

PL will further advance technical improvements to its existing, proprietary AI algorithms to deliver a unique technology for business leaders to measure, adapt and monitor their D&I strategy in the most environmental and sustainable manner. Employers can use quantitative ways to visualise the positive impact of different strategies on business performance to optimise their D&I policies.

In this project, D&I data will be collected, organised and analysed to strengthen existing proprietary datasets, indices for national and industry benchmarking. Scenario-based simulations will be provided to visualise optimised potential business outputs, in relation to D&I factors, to support data-driven decision making in real time.

The output will be a commercially-usable prototype, via a novel business-to-business software solution that can be deployed in pilot testings across all sectors, to generate meaningful impact in real life operating conditions.

PL aims to support the UK economy's growth and recovery following the effects of COVID-19 in the most environmental and sustainable manner. PL will use AI-technology to support businesses identifying their optimal D&I strategies, and therefore creating more diverse and inclusive workplaces. The output will ultimately lead to increased business productivity and innovation to counter COVID-19's economical repercussions on the public and country.

[0]: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-thrive-tal-start-employee-education-training-in-crisispdf2.pdf>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ECOSSE SPORTS LIMITED	Pitch2Panel	£58,359	£46,687
IMPACT LABORATORIES LIMITED		£97,417	£77,934
Queen's University of Belfast		£43,499	£43,499

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Pitch2Panel is a unique project which seeks to provide a full circular lifecycle solution for plastic synthetic pitches/turf in a post COVID economy. Currently 1.5million m2 of plastic turf is landfilled (5000 tonnes) or discarded in the UK annually and there is no current end of life solution. Ecosse Sports, a leading synthetic pitch installer have developed recycling facilities to recover materials from the turf, including sand and rubber. This project will enable Ecosse to also recover the plastic component, create a new value added product which will deliver significant cost savings to the end users of synthetic pitches, as well as increasing the sustainability of the industry.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
XBIM LTD.	NetZeroFlow : Smart Dataflows for Digital Construction	£146,271	£117,017
CIRCULAR ECOLOGY LTD		£62,976	£50,381

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

**\*\*NetZeroFlow\*\*** is a technology platform and carbon data set that drives the design of new buildings and the refurbishment and re-purposing of existing buildings, to achieve a Net Zero Carbon outcome.

COVID-19 has changed the way buildings will be designed and operated in the future. Design teams need to work increasingly remotely, where they once shared an office. Consultants need to provide their expertise and services digitally. Buildings need to be built better and their occupants need to be safer (Grenfell).

Key components of the "Build Better" agenda will be the UK's need to meet the Climate Change 2050 carbon targets and Building Safety Act's requirement to deliver the "Golden Thread" of Information.

Xbim provides a cloud-based Building Information Modelling (BIM) platform that supports the sharing of information, 3D views and plans of building designs. It is an inclusive platform that enables all parties (from specialist to general public) in the construction process to engage and contribute to the collaborative production and sharing of information (ISO19650).

Circular Ecology are experts in carbon foot-printing, carbon offsetting and life-cycle assessment. They maintain and own key data sets for carbon assessment.

The proposal is to automate how design teams can Measure, Manage and Mitigate the process of achieving Net Zero Construction. This will be achieved by adding a Smart Workflow Engine to the Flex BIM platform and creating a database of carbon costed construction products and elements. These will be brought together by a series of configurable and customisable workflows that drive a design to Net Zero. For example, continually calculating the total embodied carbon in the as-designed building, whilst substituting different construction materials and products.

NetZeroFlow will remove the bottleneck of carbon assessment (presented by a limited number of specialist consultants) by enabling the construction design teams to perform iterative carbon reduction engineering, freeing the carbon consultants time for higher value/impact activities and improving the consistency and outcome of the final results. The Smart Workflow Engine will unlock further innovation potential in the construction sector by enabling other routine tasks to be automated and offloaded to the cloud.

As part of this project NetFlowZero will help extend the reach of OpenBIM workflows into Infrastructure projects through uplifting the free open source Xbim Toolkit to support BuildingSMART's latest IFC4x3 Infrastructure extensions.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OXMETICS LTD	The OxPlastics project: Development of a novel long-lasting composite metallo-plastic 'soap' bar able to denature viruses and kill bacteria	£101,255	£81,004

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This 9 month project will involve the design and testing of a novel antimicrobial composite plastic & metal 'soap' bar able to last for years with daily use. It will be strongly anti viral and anti bacterial; able to denature viruses and kill bacteria, with a kill-rate anticipated to exceed 99%. It will require very little water to function, will not dry out the skin, and should last for years with regular use. It has the potential to help millions of people within the UK and worldwide, as it will avoid the unnecessary use of bactericidal chemicals in handsoaps, and the plastic bottles in which they are contained, while being a cost-effective and environmentally friendly to denature viruses and bacteria on the hands, to protect the user against contact. During this time of uncertainty with Covid-19, awareness of the spread of diseases by direct contact and the importance of thorough hand washing has been highlighted to the public. Supplies of soap, however, have been erratic and regular handwashing is causing painful cracked and dry skin, which may enhance the ability for diseases to enter the system. This is a highly innovative project, and to the company's knowledge has not been tested before. The founders of Oxmetics are two experienced female scientists with doctorate degrees from the University of Oxford in materials science and biochemical engineering, with extensive experience in designing and testing new materials, with a focus on antibacterial activity. By the end of the 6 month project, we anticipate to have designed and tested multiple designs to produce a functional wash-bar product with low production cost, high antimicrobial activity and excellent longevity. Future product iterations will swap the 3D printed plastic core for recycled, eco-friendly compressed plastic.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VOYAGER MARINE LTD	The Conversion of the UK's First Domestic Passenger Vessel to Fully Electric Propulsion	£126,876	£101,501
E-MARINE SOLUTIONS LIMITED		£106,356	£85,085
EVPARTS UK LTD		£106,235	£84,988
PLYMOUTH BOAT TRIPS LIMITED		£160,395	£128,316

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project is the conversion of the UK's first Domestic Passenger Vessel (DPV) from diesel to fully electric operation and to utilise Voyager Marine's boatyard (Voyager) for this work, during a period where capacity has been released due to the impact of COVID-19.

This project is groundbreaking as it is the first in the UK to develop fully electric propulsion for DPVs operating in the maritime environment. A DPV can carry up to 250 passengers and operate up to 15 miles from harbour.

There are significant challenges to overcome including being the first to install fully electric propulsion onto this type of vessel. We have been working closely with the regulatory authorities to ensure that we meet or exceed the stringent safety requirements set.

The environmental challenges relate principally to operating in a maritime environment, where the atmosphere is salt laden, weather and tide have a significant impact on equipment placement and protection. Weather and tidal flow also impacts on the power requirements for vessels, and the propulsion systems will need to be effective and safe to operate in adverse weather, with strong winds and heavy seas, with associated aggressive vessel movements and potential sea water ingress.

The technical challenges include developing suitably robust systems for operation on Domestic Passenger Vessels, developing energy storage solutions that can work for the vessel. The control and monitoring systems will also be developed to operate effectively in the maritime environment.

All commercial vessels and especially DPVs must meet the stringent requirements of the regulatory authority. We are working closely with them to develop a pathway for approval, the innovative approach we have taken has allowed us to develop a relationship, potentially enabling us to become the first in the UK to obtain approval to operate a DPV with fully electric propulsion.

The operational challenges with the development of the UK's first fully electric DPV include ensuring that the end users are trained, to ensure that this innovative vessel is operable by traditional, skilled Skippers and crew. This will also include training and awareness of the systems as we develop the vessel, therefore, full involvement in this process is essential to ensure familiarity and confidence in the new systems and procedures.

This project is part of a planned development by the partners to convert and build fully electric commercial vessels in the under 24m sector. COVID-19 has had a significant impact in all sectors including the tourist trade, this directly affects the DPV operators and indirectly, the supporting infrastructure, including boatyards where annual maintenance and new build would take place.

This funding will allow us to make use of Voyager, aid its transitioning from traditional maintenance and build of Passenger vessels, to the conversion of the UK's first fully electric DPV. The opportunity to carry out this groundbreaking work during the period from 1st October 2020 to 31st May 2021, will be transformational for the sector and will ensure that Voyager has a secure future.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BRILL POWER LIMITED	Second Life Batteries for Commercial Energy Use	£147,753	£118,202
ACEON BATTERY SOLAR TECHNOLOGY LTD		£163,794	£131,035
Cranfield University		£99,930	£99,930

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Brill Power, AceOn Group and Cranfield University are collaborating on a project to design, build and install a smart, 2nd life battery system at Cranfield's Digital Aviation Research and Technology Centre, made from up-cycled electric bus batteries. The battery system will be connected with a solar PV array and an inverter to feed solar energy back to the local grid at Cranfield campus. This will help Cranfield decarbonise its energy use by maximising the use of renewable solar energy.

Cranfield University has more than 1MWp of solar PV generation on its Cranfield campus and is looking for low-cost, sustainable energy storage solutions to help match solar generation with electricity demands. The university also has access to 8 used electric bus batteries, which the university would like to up-cycle for use in energy storage. Upcycling lithium-ion batteries is challenging because there can be large differences in the performance of aged battery cells and conventional battery systems are only as strong and live as their weakest cells. Brill Power has developed a novel battery management system (BMS), which compensates for these differences in cell performance and ensures maximal lifetime, performance and safety. AceOn Group has more than 25 years of experience in designing and manufacturing battery systems and will create a smart 2nd life battery, using Brill Power's BMS and Cranfield's used electric bus batteries. Together, the partners will be able to create and demonstrate a novel energy storage system with a circular economy approach, which helps Cranfield University decarbonise its energy use and save electricity bills. The project will also help Brill Power and AceOn Group create a blueprint for a broader commercial roll-out of this novel technology.

The project will enable the partners to overcome a number of challenges created by the COVID-19 pandemic, including fewer commercial opportunities in the energy storage industry, lower direct use of solar energy at Cranfield University due to lower student and staff numbers on campus, and a lack of funding and project opportunities to re-purpose used electric bus batteries for stationary energy storage.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ALICE SI LTD	SAVE - Sustainable poverty Alleviation of Vulnerable populations, through big data analytics and Evaluation	£217,778	£174,222
RESONANCE LIMITED		£34,632	£27,706

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Surging unemployment in the UK, induced by Covid-19 containment measures, has caused 500,000 people to be in rent arrears and 45,000 households at a serious risk of homelessness (Big Issue, July 1, 2020).

The cost to the UK government, of a person sleeping rough for a year, is £20,128 while the cost of a successful intervention by service providers is £1,426 (At What Cost, 2015).

In order to capture and cater to vulnerable populations, amidst the Covid-19 crisis, we need a radical and urgent improvement on the current status-quo of beneficiary data aggregation and impact verification of social services, to accurately mitigate the widening socio-economic disparities at hand.

Alice SI Ltd (Alice) is an award-winning decentralised impact finance and measurement infrastructure, built on blockchain technology, that automates data management and analytics for nonprofits, impact investors, and governments.

Alice's collaborator for the SAVE project is Resonance, which runs the UK's biggest Homelessness Property Funds, with £220 million of assets under management, and houses 1,600 people in 559 properties across the UK.

Alice will collaborate with Resonance to reduce Covid-19 induced homelessness, through big data analytics of social services delivered to vulnerably housed people, to enable their long-term socio-economic revival.

The SAVE prototype will springboard big data-based impact monitoring and evaluation across the social services sector, and drive, as a result, admin cost reduction by 50% and more effective funds allocation.

Innovative modules and features of the SAVE platform are:

- \*\*a) Automation of data aggregation\*\*, with data originating initially from Resonance and its broad network of social and housing services organisations,
- \*\*b) Beneficiaries' Self-Sovereign ID\*\* to generate beneficiary-led data on the distribution and effectiveness of support services, empowering the beneficiaries to be the sole owner and manager of their data and, ensuring their privacy and dignified treatment,
- \*\*c) Decentralised governance\*\*, based on a Proof-of-Stake mechanism, which will involve challenging R&D, yet will ensure environmental sustainability,
- \*\*d) Private micropayments in a circular economy\*\*, which will incentivise expenditure of funds allocated to beneficiaries in their neighborhoods' local shops, contributing to most needed wider economic growth and containing a potential further Covid-19 outbreak in isolated regions.

In a social arena, where government agencies and nonprofits rely on incomplete, siloed, and unstructured data, the SAVE project will positively disrupt impact measurement practices and introduce a technical shift in underlying digital infrastructures, with its decentralised and transparent data governance.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

The SAVE project aims to alleviate Covid-19's financial impact, creating a sustainable and responsible data economy that delivers social value, giving the UK a market-lead that will spearhead Alice's global expansion.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MIND FOUNDRY LIMITED	Development and Commercialisation of AI certification platform for the banking sector	£218,638	£174,910

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In the wake of COVID-19, businesses of all sizes will need loans to survive, rebuild, and grow their way back to economic success. Banks will be needed to release liquidity into the economy, making the right lending decisions without being biased towards or discriminating against any sections of the economy and our society. At the same time, these same banks are experiencing severe and unexpected loan impairment due to COVID-19, and, as a result, they are taking a cautious approach to credit.

Modern banks already make use of Machine Learning systems to quickly and efficiently evaluate and act on loan applications across their lending operations. However, banks currently rely on existing compliance and governance structures to manage these new decision-making systems, structures which lack the knowledge and expertise to anticipate the possible failings of Machine Learning systems. Banks themselves project that they will become increasingly reliant on the automation and scalability that their ML models can and do provide. This poses a significant risk in ensuring that the banks comply with industry standards and regulations, such as non-discrimination or data privacy.

Through this 9 month industrial research project, we at Mind Foundry Ltd will deliver a tool addressing compliance of ML models for approving loan applications. The solution will consist of a certification system comprising a definition of compliance for ML models in the field of loan approval, methods for exposing when trained ML models are not compliant, and a mechanism for applying these methods to trained models.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NUVA ENTERPRISES LTD	Solving the problem of desktop remote collaboration being unable to cope with complex design and planning work- Project Synapse	£230,205	£174,164

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

nuVa is a virtual meeting solution to the challenges of remote work brought on by the pandemic. Though fine for many uses, tools such as Zoom and Microsoft Teams, by limiting the breadth of human interaction, impede the creativity and innovation that are crucial for organisations to succeed and stop many designers and engineers from working effectively at all.

Through its unique digital environment, powered by research from MIT and the University of Cambridge, nuVa technology delivers the richest virtual meeting experience available today. While nuVa's potential has been proven with key corporate & public sector customers, this project will transform our market offering to global markets, while enhancing nuVa's virtual meeting experience through AR and AI technologies. nuVa then becomes a real alternative to in-person meetings: boosting innovation and creativity, while cutting costs and pollution from travel and allowing organisations to recruit in a completely geographically independent way.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Q-BOT LIMITED	AIR (Autonomous Insulation Robots)	£174,517	£139,614
GREYSTOKE SYSTEMS LIMITED		£119,894	£95,915

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Q-Bot has developed the first affordable and fully accredited (BBA Certificate Number 17/5440i1) solution for the retrofit of insulation to suspended timber floors. The solution works by using a robot that can access the void via a vent or hatch and insulate the underside of suspended timber floors with minimal disruption. Q-Bot has had a number of patents granted in the UK to protect the application and system. Each installation saves on average 2,600 kWh of heating energy, 600kg of CO2 emissions and £125 per dwelling, annually (as verified by the Energy Saving Trust) successfully dealing with one of the most challenging areas of CO2 reduction - the Built Environment. The company designs and builds the robots in-house with this novel service already accredited by the BBA and fully ECO compliant, and has insulated almost 1,000 homes so far. Q-Bot's goal is to make it easier for contractors to deliver quality retrofit projects by providing them with tools that identify the needs of each property, automate repetitive tasks and track the quality of the work done.

To deliver the low-disruption insulation of suspended timber floors Q-Bot has developed robots for accessing and spraying the insulation to the underside of a suspended floor. The robots are controlled using a game pad with the operator using the view from onboard cameras to guide the robot into place, select the most appropriate 'pattern' to apply insulation and adjust the pattern to the correct location on the underfloor surface. Each step of the process is fully recorded, capturing every button press and operator input combined with readings from sensors, a video from the cameras and 3D models built from the robot's LIDAR and depth cameras. This information has created a valuable database of performance data that can be analysed to identify areas that can be automated and build simulations to test improved control systems.

Q-Bot is rolling the service out in mainland Europe, with several pilot projects across dozens of properties completed in France and the Netherlands so far. To be fully cost competitive in these markets, Q-Bot needs to enable a single person team to complete the installation efficiently and safely. Reducing the level of attention that the robot demands of the operator by automating certain tasks is critical and will enable a single person to manage one or more robots as well as the auxiliary insulation equipment. This project will focus on developing automation of Q-Bot's robots to Level 3, Conditional Automation to reduce the attention required from operatives and to enable a single person to deliver the service. This will reduce costs, improve the productivity of each team and facilitate expansion into France and the Netherlands. The progress achieved with the help of his project will not only help Q-Bot to grow domestically but create significant export opportunities. It will also significantly increase Q-Bot's positive impact on environmental sustainability and mitigation of climate change, enabling the company to deliver energy and CO2 savings at much larger volume and lower cost.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LANTERNE LTD	Crowdless: Hyper-local mobility data to support Economic Recovery	£218,192	£174,554

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The '\_Crowdless: Hyper-local mobility data to support economic recovery'\_ project is designed to accelerate the experimental development of consumer and enterprise solutions which use predictive modeling to help UK businesses manage crowds, predict demand and make investment decisions.

Crowdless's goal is to use 'crowdedness' data to restart the UK economy by restoring consumer confidence and supporting business planning and operations.

The product is built by Lanterne, an award-winning social enterprise, that specialises in geospatial data. We've been supported by the European Space Agency's Business Incubation Centre UK managed by the Science and Technology Facilities Council (part of UK Research and Innovation), the University of Oxford, the London School of Economics, and Santander Universities.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LIF NANO RX LTD	MULTIPLE SCLEROSIS: Recovery of UK's strong lead in protecting the MS Brain by securing UK-Based formulation of LIFNano™	£130,003	£104,002
PHARMIDEX PHARMACEUTICAL SERVICES LIMITED		£139,577	£111,662

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### PROTECTING THE BRAIN IN PEOPLE WITH MULTIPLE SCLEROSIS (MS)

\* \*\*MS\*\* is a demyelinating autoimmune disease that attacks the brain, with year-on-year loss of brain volume, starting late teens and becoming manifest late twenties. There is no cure. Current therapies are immunosuppressive only.

\* The COVID-19 pandemic has spotlighted the vulnerable young including the UK's MS-ers (people with MS) who need continued shielding as lockdown eases.

\* The microSME \*\*LIFNanoRx (LNT)\*\* is a spin out from the University of Cambridge, founded by scientist Su Metcalfe to treat MS. Recognising the need to protect the brain, she captured the profound neuro-protective properties of LIF - a stem cell growth factor essential for brain health - using nanoparticles of FDA-approved gel to provide a homing device for sustained delivery of LIF cargo to the brain. Collaborator Tarek Fahmy at Yale University contributed remarkable ability to manufacture the LIF-containing nanoparticles and is co-inventor of the technology patents owned by Metcalfe.

\* The preclinical data is compelling, confirming efficacy and safety in models of MS, and partially reversing paralysis within 4 days of treatment. Notably the therapeutic nanoparticles "LIFNano(tm)" cross the Blood-Brain Barrier (BBB) - a highly sought after property for treatment of diseases of the central nervous system (CNS).

\* By protecting the brain, LIFNano(tm) provides a low cost, high value, safe solution for people suffering from MS. Supported by previous government grants, LIFNanoRx is now a major force - a David amongst Goliaths - where the MS market is lucrative with high costs to payers and high rewards to Suppliers of drugs for MS.

\* LNT brings a uniquely disruptive approach and there are many followers of LNT within the MS community who understand LIF is not only a drug-free natural solution to protect and heal the brain, but also may quench the autoimmune root-cause of MS.

### COVID-19

\* With a Phase IB clinical trial planned for 2020/2021, to be led by UK's leading MS neurologist Gavin Giovannoni, LNT's progress to clinic was stalled by COVID-19. Lockdown has stopped our access to the LIFNano(tm) product that is custom made by Yale University.

\* This bid to the Sustainable Innovation Fund of I-UK will transfer manufacture of LIFNano(tm) to the UK, to be undertaken by Pharmidex, another UK SME with robust growth providing services to evaluate medicines that treat the brain.

### THE SIMPLE CLEAN TECHNOLOGY

\* As an entirely synthetic product, LIFNano(tm) vastly reduces impact on the environment compared to cell-based therapies. By exploiting LIF, LNT brings a new generation of treatments for currently untreatable diseases of the CNS, including rare diseases where 30% involve the CNS.

LNT is an innovation leader, with impacts on UK's ability to drive growth. For MS, the immediate need is CTA that will maintain the high trajectory of LNT towards first in human trials. This Project not only brings our simple clean technology to the UK, to overcome the adverse impact of COVID-19 on LNT's progress to treat patients who suffer from MS. It also adds commercial strength to the UK economy as a leader in NanoMedicines.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VIRTUAL POST LIMITED	POPPA - Post Production Provided Anywhere	£238,780	£174,309
OVATIONDATA LIMITED		£218,564	£174,851

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Virtual Post and OvationData are collaborating to create POPPA (Post Production Provided Anywhere) a new infrastructure and service for clients to address the urgent needs of companies in the production and post-production sectors due to the impact of COVID-19; as well as providing a more sustainable workflow for the long-term.

POPPA will allow companies to quickly and easily set up staff to work remotely with a fully provisioned toolset for film and television work under the COVID-19 climate. The main motivation for our project is to attempt to counter problems caused by COVID-19 where after lockdown, productions were shut down and the usual industry practices involved people in proximity to each other were prevented. OvationData will use their expertise in cloud provision and equipment provision on which Virtual Post will provide a flexible toolset which can be tailored for each client's needs whilst maintaining security protocols.

Through this pandemic, the media and entertainment industry has developed an appetite for change. Furthermore, society as a whole has adjusted to remote working and are open to working differently. Many companies have had to pivot to adjust for remote working; with this way of working set to establish itself hence, we feel our project extremely relevant in the current climate.

We wish to offer the fastest and safest route out of the present situation, allow productions to get back on schedule, and offer ways of working that will help in case of a 'second spike' of COVID-19. By developing a virtual post-production environment we will allow teams to work remotely, but maintain the collaboration and on-premise experience as before. With minimal COVID-19 risk as there is no requirement to meet in person and minimal reliance on exchanging physical media.

The aim is for our solution to be sustainable in the long term. After catching up the backlog of productions, we will provide for clients and prospects to work from anywhere, reduce costs and efficiencies through new workflows and remote technology. By not owning equipment, there are zero costs in downtime. The same goes for physical premises. By eliminating and reducing such costs production efficiency is improved, and production becomes more environmentally sustainable because of the travel reductions.

Our solution will additionally cater effectively for those that cannot work a 9-5 Monday to Friday job. Those that have care responsibilities or other location restrictions can contribute to projects when it is convenient for them by using our new service provision from POPPA.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HEALTHERA LTD	Low friction integrated same day and tracked delivery of prescription medication to support vulnerable groups during the pandemic	£218,213	£174,570

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Each year 1.3 billion UK prescription items are dispensed, of which only 26 million are acquired online. This means that 1,274,000,000 orders are still obtained in person, involving visits to the GP and multiple visits to the pharmacy, all these entities work on their own with little communication.

At Healthera we believe getting and taking your medication should be simple and hassle free. That is why we have built an App to modernise the experience, providing software to connect the fragmented system and deliver a reliable online prescription solution. Our existing, NHS-Accredited, App allows patients to order medicine and connect with a pharmacy local to them at the touch of a button. When the medicine is ready they can choose to pick up from the pharmacy or, where the pharmacy offers delivery, choose the delivery option. This reduces pharmacy visits and has shown itself to be particularly welcome during the COVID-19 pandemic. The pandemic has highlighted how many in our society are vulnerable and reliant on uninterrupted access to their pharmacists and medication. By contacting some of the 1,000 pharmacies that already use our existing NHS-Accredited App we have identified a gap in the market, we aim to fill this gap with a same-day on-demand tracked delivery service for prescription drugs available to all pharmacies that use our App.

Some pharmacies already offer a delivery service, but not all pharmacies have the staff or money required for this. For those that do the way deliveries are processed and undertaken is anything but clear and consistent. The patient often has to call a pharmacy to check if delivery is actually available to them as there often aren't clear guidelines on:

1. Who is eligible for free delivery as each pharmacy sets their own rules, often discriminating by the patient's condition or the number of items ordered.
2. How much they charge for delivery.
3. When the delivery would arrive.
4. Any means of communicating with the delivery team.

We know that patients are increasingly looking for a fast, reliable and convenient way to obtain their prescriptions, especially in recent times given the travel disruption caused by the pandemic.

Through completion of this research project, we aim to:

- o Offer every patient a fast and reliable local delivery option by offering all the pharmacies on our platform the opportunity to deliver prescriptions through a third-party delivery fleet local to them.
- \* Our initial pilot test will focus on offering local delivery in London, where lots of people live and traffic restrictions mean pharmacies offering delivery are few and far between.
- o Reduce the overall prescription ordering time from 14 days to a same day service and improve the medication experience for 30 million patients in the UK.

A delivery option extends and improves the capabilities of the partner pharmacies with which we already do business, in essence we will be to the local pharmacy market what Deliveroo is to the takeaway food business.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LIFEBOX HEALTH LIMITED	Smart E-forms for patient care in Virtual clinics	£277,680	£174,938

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

This is a project to deliver smart forms which enable a patient to deliver key information about their condition to a healthcare provider that is looking after them in a structured way. The patient will be able to use these forms and associated technology to monitor their condition and get regular feedback on progress.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CHROMOSOL LIMITED	Silicon Photonics 2.0	£232,780	£174,585
Queen Mary University of London		£73,160	£73,160

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Nokia reported a 30% growth in network traffic within weeks of Covid-19 restrictions being implemented, a value normally typical of annual growth rates. Whilst UK operators have coped with this initial surge in demand, post-covid whole communities will move to new digital ways of working and living, leading to new patterns of demand and behaviour. This represents a stark challenge to UK digital infrastructure in terms of elevated demand and uncertainty around patterns of use. In order to support the UK's post-Covid recovery as well as accelerate the ongoing digital transformation being driven by the introduction of 5G networks, the UK's digital infrastructure will need to accommodate scale as well as become more flexible and responsive to user behaviour. Specifically there is a critical need for higher data transfer rates and lower latency.

This requirement translates directly into the need for improved transceiver technologies both in the datacentre environment and for the fronthaul in 5G networks. In the datacentre the requirement for low cost, low power, small form factor and high performance photonics to serve the pre-covid data transfer needs has already necessitated the deployment of advanced Silicon Photonics technologies. This has enabled many of the optical components required in transceivers to be integrated into silicon. However, current silicon photonics is missing a key ingredient - light generation and amplification. Currently laser sources and optical amplifiers are fabricated in different compound semiconductor material systems and then co-packaged with the silicon photonics.

Integrated Silicon-based lasers and amplifiers are therefore a holy grail in the industry with the promise of lower fabrication costs combined with significant reduction in power requirement and increases in efficiency. Chromosol, a spin-out from QMUL, has developed a technology based on a 2-component optical gain and sensitizer system which can be co-evaporated on top of a silicon-based waveguide that produces an integrated optical gain of 5dB/cm.

This project will focus on developing the Chromosol technology to take fully integrated silicon photonics into the marketplace and has three components:

1. Integrated Lasing. Having already demonstrated integrated silicon gain, the next step is to demonstrate integrated silicon lasing. This will require in-house photonics design and the outsourced production of the base silicon photonic chips. The Chromosol organic materials will be deposited on the photonic chips to demonstrate lasing and amplified optical signals of  $>0$  dBm (1mW).
2. Enhancing Lifetime. The OLED industry has used inorganic Atomic Layer Deposition (ALD) to successfully extended the lifetime of their materials to over 50000 hours. The ALD process will be used to experiment with different deposition conditions and characterise the performance of the layers both directly through lifetime, but also using standard diagnostic equipment with the aim of enhancing lifetime by an order of magnitude.
3. Enhancement Efficiency. The current materials achieve record breaking efficiencies, however, engineering the gain molecule will improve significantly the efficiency and therefore the overall quantum efficiency of our lasers and amplifiers.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SE2 LIMITED	Virtual Heat Network Manager	£85,022	£68,018
ADECOE LIMITED		£20,005	£16,004
ALCEDO RIPPLE LTD		£20,005	£16,004
OCTAVIA HOUSING		£8,156	£6,525

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

**\*\*Our project is for Virtual Heat Network Manager (VHNM) service for social housing providers.\*\***

There are currently 14,000 heat networks in the UK, providing heating and hot water to over 450,000 homes. Social housing providers (Housing Associations and Local Authorities) are estimated to manage over 50% of these heat networks on a not-for-profit basis. All Committee on Climate Change scenarios for the UK's 2050 net zero carbon target require an increase in heat networks from 2% to at least 17% of all homes - that's over 4 million customers.

In order for heat networks to deliver on their low cost, low carbon potential, they must be effectively managed: an efficient heat network uses less energy and emits less carbon. However, heat networks can be complex: without careful and detailed management they frequently run at less than 50% efficiency. For social housing providers, heat networks comprise only a very small part of their wider organisational delivery. The data needed to run efficient heat networks is available but social housing providers simply do not have the resource to absorb and analyse it, meaning opportunities to improve schemes and to support customers are missed.

Inefficient heat networks also cost more to run. This increases running costs for customers, many of whom are on low incomes and at risk of fuel poverty or self-disconnection. Customers can't switch suppliers and so are more likely to suffer detriment than typical energy consumers: it's important to get heat networks working for them now.

Covid-19 has exacerbated problems for many customers, who are now facing lower incomes at the same time as they are having to be at home more. Housing association staff are even more stretched than usual and routine site visits to maintain the plant have had to be delayed.

Data without analysis and action does not lead to change. The VHNM will provide the data analysis service for social housing providers that they are under-resourced to deliver themselves. We will remotely monitor heat network data to assess and analyse heat networks for the early identification of scheme issues before systems fail, to identify scheme trends and support vulnerable customers, to assess costs and efficiency, to carry out annual reviews including tariff assessments, and to deliver improved scheme efficiency. This will help to ensure schemes are delivering the lowest cost and lowest carbon emissions. The VHNM can use data sources from any heat network and can be replicated across the UK.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SCANQUO LTD	Cleaning Contract Benchmarking and COVID Assessments	£215,210	£172,168

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

ScanQuo is a UK-based SME that was founded by Keith Ryan, and Jeffrey Teglas. COVID-19 has increased the significance of workplace cleanliness. ScanQuo aims to produce a scanning technology software solution that can be used for digital twin buildings for benchmarking cleaning contract pricing.

Traditional cost pricing is based on a per square metre basis irrespective of building fixtures, fittings, furniture. The ScanQuo Benchmarking of facilities management services develops absolute clarity with an itinerary of activity, frequency of duties and addresses specific workspace e.g. accounting for total number of desks, chairs, windows, shelves, toilet cubicles, washbasins and surface types eg carpeted areas sizes, tile flooring requiring buffing etc. that can be used by Facilities management companies and premises owners to specify exact cleaning/service requirements when going out to tender and make cleaning organisations accountable for quality by making cleaning auditable. For cleaning companies, they have clarity of purpose, and a clear understanding of resource requirements and materials usage and cleaning functions expected.

COVID-19 has raised the importance of the employer's duty of care for workplace cleanliness, and infection prevention control and the need to provide a safe working environment. The ScanQuo technology can be used for COVID assessments of facilities for return-to-work assessment so fo intervention requirements e.g. social distancing, identify the placement of resources e.g. hand sanitiser stations and can plan social distancing arrangements and identify low control areas e.g. doorways, lifts, canteens, common areas, toilet where higher risks might occur.

Currently, commissioning contract cleaning services is based on un-auditable estimates. ScanQuo's solution quantifies sanitisation protocols and cleaning frequencies that can be monitored, thereby resulting in cleaner and safer buildings and work environments reduction in the use of environmentally harmful cleaning products and provide assurance for infection prevention control measures and employers legal duties.

Cleaning and COVID assessment sit at the heart of this innovation but applications of the solution can be extensively applied across the whole Facilities management procurement process. e.g. inventory control of furniture and equipment, Management of safety equipment and service cycles, external building areas - Gardening, grounds maintenance and landscape contracts, building renewal, carpeting, lighting and/or glazing contracts etc.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MONITOR COATINGS LIMITED	Remote Manufacturing Process Monitoring, Control & Troubleshooting Through Machine Learning IIoT	£99,745	£49,872
TRL9 LIMITED		£98,510	£78,808

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Monitor Coatings and TRL9 are both surface engineering companies with customers from all key industry sectors both in the UK and abroad. Over the last 5 years, with the support from Innovate UK, both companies have developed game changing technologies that are shared, through technology transfer licenses, to customers and competitors alike. Such outward transfer of technology has become an important dimension in our corporate strategies and has created a highly interdependent ecosystem between MCL, TRL9 and the organisations currently using our technologies.

Due to COVID-19 travel restrictions, most of the work is currently done remotely. However, in the absence of sophisticated digital remote assistance and monitoring tools the quality of technical and service support to our licensees is extremely compromised. This in turn has caused disruption within the supply chain affecting several UK companies.

**\*\*Value Proposition:\*\*** The proposed concept is a flexible system that makes quality management, training and troubleshooting easier by connecting and automating the coating application activities throughout the ecosystem. Live and historic spray data will be available to a database enabling issues that affect quality to be quickly identified and resolved centrally-even across global operations and into the supplier network. The key value proposition of the digital twin is its ability to combine real-time data, physical dependency models and intelligence from different platforms to simulate, predict and improve assets and E2E processes.

**\*\*Equality, diversity and inclusion\*\*:** Unlike the traditional male dominated surface engineering industry; IoT and Digital Manufacturing presents itself naturally as a genderless and inclusive sector.

**\*\*Environment:\*\*** Thermal spray is a viable alternative to carcinogenic hard chrome plating. The proposed platform will offer a non-destructive coating testing method minimising the waste disposal during cutting and polishing of samples and will result in less part rejections and reworks across all plants using this technology.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GLIMPSE PROTOCOL LIMITED	Glimpse Protocol: an innovative data privacy solution to support advertisers and publishers	£217,211	£173,769

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Glimpse Protocol is developing new privacy-enhancing technology to allow organisations to interact with consumer data privately. There is wide application for our technology, including medical research, Covid track-and-trace applications, retail and digital advertising.

Glimpse Protocol uses novel cryptography and an advanced distributed architecture to uniquely solve the paradox of delivering personalized services to consumers while respecting privacy. It also operates in a transparent, openly auditable manner and dramatically reduces fraud.

The first commercial application will create an ethical platform for digital advertising. This is in response to the current legislative focus across the UK, EU and US, which is forcing advertising to adopt new privacy standards. Glimpse's platform not only complies completely with new privacy regulation but it offers improved value to advertisers and publishers. These industries have been heavily impacted by Covid and are seeking innovative future-facing technologies that meet the privacy demands from society. It is also designed to transform the industry that lies at the heart of the most invasive data harms; it is digital advertising that conducts the industrialised harvesting of personal data and originates many of the ensuing harms.

This project will develop the technology from a feasibility study into experimental development, towards a technical MVP and readiness for commercialisation. It harnesses a number of frontier technologies into an innovative architecture to provide an alternative model for digital advertising and, later, the delivery of a wide range of personalised services online.

Glimpse is a highly disruptive and innovative technology. It is aimed at a vast global market and can be commercialised rapidly. It supports the UK's thriving creative industries of advertising and publishing, who have been hard hit by Covid. To those industries, Glimpse offers greater effectiveness, lower costs and higher revenue, thereby improving the productivity of a key UK industry and supporting their re-emergence post-Covid. Glimpse allows this industry to adapt to, and de-risk, the disruption from imminent privacy legislation, and places the UK at the forefront of the global trend towards data privacy.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KIND CALL LTD	Settld - Bringing the death industry into the 21st Century	£174,947	£139,958
FLEXEWEBS LTD		£24,828	£19,862
Tim Reid Media		£26,050	£20,840

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Approximately 600,000 UK deaths occur per year with another 45,000 lives tragically claimed by Covid-19 in 2020 so far. Each loss is a emotional burden on bereaved families, but also presents operational challenges for multiple service-suppliers; death industry businesses; local councils; social services; and health care professionals, all of whom have a duty of care to support legal and contractual processes after someone dies.

In May 2020 Kind Call Ltd (operating under the name [Settld][0]) was selected for a Covid-19 (DeMinimus) Rapid Response Innovate UK Grant to develop an account closure prototype. Now in closed beta testing, this product automates the account closure process for law firms and local councils, saving up to 95% in administrative time previously needed to complete this task. It also provides a new, automated notification channel for service providers to reduce traffic to their customer call lines and prevent potential brand damage when they fail to attend to bereavement cases swiftly and sensitively (i.e. [Halifax adds to the hell of bereavement][1]).

Building on from the success of our prototype, the SIF project allows us to expand our MVP into a direct, carbon-free, end-of-life platform to connect businesses with bereaved consumers. Our full product will include:

- \* Pre-death planning and support: digital document storage, links to funeral planning, insurance and will-writing.
- \* Marketplace: connecting service-suppliers, probate law firms, health providers, local authorities and other companies to consumers, for all aspects of direct cremation and end-of-life celebration.
- \* Automated account closure (existing prototype): facilitating low cost, high efficiency, stress free estate administration.

This project reduces the impact of COVID-19 for multiple industries, by providing a digital solution which supports business operational efficiency, reduces expenditure, enhances customer service, and maintains trust between organisation and their customers. We contribute to an improved sustainable economy via transparent corporate governance for bereaved/vulnerable customers and bring a scalable and paperless solution to an industry in desperate need of digital transformation.

[0]: <https://www.settld.care/>

[1]: <https://www.thetimes.co.uk/edition/money/halifax-adds-to-the-hell-of-bereavement-593zjx0qh>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CENTAUR ROBOTICS LIMITED	Inclusive Design of Personal Electric Vehicles to protect against COVID-19	£262,460	£173,224

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 disproportionately affects wheelchair users, particularly those who are disabled or live in care homes. As a result of COVID-19, 200,000 residents of care homes and 22,000+ disabled people have died, two-thirds of all deaths from March to May (ONS).

The Coronavirus Act received Royal Assent in March 2020. It limits statutory care requirements only to where "urgent care needs are met, and defer meeting some other, less acute or pressing needs." In other words, vulnerable people (wheelchair users included) only receive urgent care and activities of daily living are left to the individual.

Wheelchair users need help to be safe against COVID-19. Centaur can adapt existing plans to meet new needs of vulnerable customers at high risk of aerosol disease transmission.

Centaur's Personal Electric Vehicle (PEV) facilitates dignified, independent living but more importantly can better protect users from disease transmission in four ways;

1. Being height adjustable = due to the nature of aerosol based infection spread the lower you are the higher the risk of contamination and infection in public spaces.
2. Being powered and having enhanced access and egress considerations = less manual handling and transfers results in reduced staff/user proximity and contact.
3. Cleanability = the wheelchair is designed in adherence to DH/Design Council's Design Bugs Out programme and is significantly easier to decontaminate than existing chairs, which are nearly impossible to guarantee have been adequately disinfected.
4. Helping enforce social distancing = through collision avoidance and visual/audible/haptic cues to PEV users and people near the PEV social distancing can be maintained.

After establishing a new paradigm for personal mobility, illustrating market acceptance of social distancing features and scaling production to achieve economies of scale, Centaur will offer lower priced PEVs that are highly desirable for people with mobility needs and want to break social stigma created by 100 year old wheelchair designs.

Centaur's five year plan targets the US and European electric wheelchair market, which represents \$2.4B and \$1.6B respectively in 2020 and expected to grow 10.5% CAGR

Currently, no wheelchairs in the market offer collision avoidance nor cues for social distancing. This project progresses foundational development of collision avoidance features and provides features specific to COVID-19 social distancing.

Centaur is the only UK company in the race for next generation personal electric vehicles.

These features will be first-to-market and, therefore, offers Centaur "first mover advantage".

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Centaur aims to become zero carbon emissions by incorporating:

- \* New "rugged plastic" materials that are easier to recycle than existing wheelchairs;
- \* More environmentally friendly batteries;
- \* Batteries made from recycled materials;
- \* Centaur maintenance plan provides battery recycling.

The team is world class, led by Ford's former Global Design Chief and the UK's newly established Design Age Institute Director, Colum Lowe.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SWITCHEE LIMITED	Effective monitoring of fitness for human habitation standards in UK social housing	£216,765	£173,412

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 has had a dramatic impact on the way we use our homes and in the context of social housing this generates numerous challenges to residents and landlords. People have spent more time in their own homes than ever before, leading to higher levels of disrepair. Meanwhile, repairing properties is difficult and costly for landlords as a result of social distancing requirements, and landlords are facing higher levels of rent arrears due to wider financial impacts.

The need to find smarter ways of improving housing quality is made more urgent by the introduction of new legislation to the sector. On the 20th of December 2018 the \_Homes (Fitness for Human Habitation) Act 2018\_ received royal assent. The bill received widespread bipartisan support from politicians as well as high-profile members of the housing industry.

Switchee will design and accredit a sensor that includes CO2, volatile organic compounds (VOC), temperature, light and humidity monitors and that can be deployed at low cost into social housing properties and communicate over the GSM (Cellular) network. The sensor will communicate via the new Switchee Econa home hub.

Switchee will also develop a FFHH landlord accessible SaaS portal and associated complex and proprietary data algorithms. These purpose-built algorithms will make an assessment on the property's current and future predicted state with respect to compliance with the FFHH Act.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPEN SPACE NETWORK LTD	Open Space Network: Building sustainable distributed working spaces for autonomous teams.	£139,493	£111,594
Cardiff University		£46,330	£46,330

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Following the outbreak of Covid-19, working practices have undeniably changed. 46% of UK employees worked from home (WFH) in April (ONS) and the accelerated digital transformation of working it necessitated will continue (LSE and British Safety Council). Changes in work location impact on productivity, well-being, the wider economy and environment.

For employers, the shift in office utilisation is a challenge and an opportunity. The cost of space is significant, with the UK the most expensive in the world. New standards for being "Covid-Secure" compound this, with de-densification of space limiting capacity and making facility management more complicated/expensive.

Alongside this, a homeworker uses 80% more energy than an office based one (WSP and British Safety Council reports), versus the alternative impact of commuting: there is no single easy solution.

Clearly, WFH versus the office need not be binary. Models blending centralised 'HQ' working, local offices and WFH are required. This offers sustainable recovery, addresses work/life balance, transport pollution and productivity. Alternative local office space is required to reduce density and this must be convenient and safe for workers to encourage utilisation.

Open Space Network will develop an innovative technology and business model to facilitate this. Using the connected capability of internet of things (IoT) devices and machine learning alongside a digital platform that coordinates safe occupancy, facilitates collaboration and access, we will create a network of Covid Secure distribute 'co-working' office spaces, flexibly available via a subscription model, across previously unfeasible locations.

Taking a network approach to offer a high number of locations at low-cost, our focus will be on the 'market towns' and brown-field properties ignored by developers as too small to be profitable. By minimising travel distances and utilising market town 'rural' hub locations we will enable people to commute by public transport or walking/cycling.

We will include an expansion of Cardiff University's MyCompanion behavioural IoT system which will achieve 2 linked functions:

- i) environmental accommodation monitoring, (e.g. humidity, temperature, air quality/movement) for Covid-security and a pleasant workspace.
- ii) social accommodation assistance, both physical (cluster points and space utilisation) alongside communicable/social characteristics/requirements (DND, open to networking, sit with friends, disability etc.)

Our existing collaboration platform will be expanded to link these systems' and its own data and through our AI capability will support underpinning functions (desk allocation, cleaning etc.) and identify environmental improvements for users and space optimisation to benefit productivity and wellbeing.

We will establish a populated demonstrator office, furnished with IoT equipment to conduct assessment of social and commercial validation of our proposition as well as an initial sustainability assessment and framework going forward for organisations and at an individual level - this analysis will be delivered by

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

subcontracted experts.

We will explore the market potential of supporting organisations to develop distributed workforces by providing a network of highly suited space. By utilising a network approach with multiple sites augmented by modern, adaptable, booking systems that can integrate with for example an organisation's shift/rotation strategies, we will offer space-as-a-service on a subscription basis.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DES19NCOR LIMITED	Gas Quality Fuel Cell Sensor Prototype Phase 1	£218,674	£174,939
Loughborough University		£92,843	£92,843

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

A Proof of Concept prototype project to create a fully working system based on a fuel cell based sensor (FCS), developed by Loughborough University and Des19ncor Ltd, that is capable of sensing and calculating calorific values in natural gases, Natural Gas with Hydrogen gases and Bio-biomethane will be measured in near real time, such that these can be used to control gas quality (i.e. Wobbe index and relative densities) in a fully integrated system.

We believe this to be a new 'first of type' class of sensor which has significant global potential, that will aid the introduction of lower carbon gas networks and help meet climate change emission targets.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INOVUS LIMITED	Computer vision based tracking of surgical training – a technology to help re skill surgeons in COVID-19	£136,707	£109,366

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The project aims to build on a novel technology developed by the company. The core technology uses computer vision (CV) to track surgical instruments in three dimensions within the surgical field of view. This instrument tracking is used to derive metrics on surgical performance and is used to deliver high level feedback and guide surgical training. The technology currently works with a static or single position camera and is used for a laparoscopic simulation and training platform recently launched by the company. This laparoscopic simulator answers the growing need for high fidelity, tracked distance learning as a result of the pressures on surgery from COVID-19.

The project aims to develop a novel technology that will enable CV tracking of instruments in a variety of other simulated surgical procedures. Successful development of this technology will enable the company to develop a suite of surgical simulators that meet the emergent demands of tracked distance learning across multiple other surgical specialities.

COVID-19 has resulted in a major back log of surgical procedures due to the cancellation of all non-emergency surgery; once normal theatre lists resume there will be limited scope for 'training cases', with a major focus on providing surgical care to thousands who have gone without during the pandemic.

The technology being developed as part of this project will enable the company to rapidly develop and commercialise simulators that can be used to replace this lost training time and ensure that surgeons are able to re skill safely as normal operating starts to resume.

The project involves the development of hardware and software, building on existing technological knowhow and IP owned by the company.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MUSH LIMITED	Mush Joosh: The JOb Opportunity Sharing Helper for mums (JOOSH)	£174,937	£139,950

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

\_\*\*Mush's Job Opportunity Sharing Hub for Mums (JOOSH): Transforming the UK's post-COVID economy one mum job-share at a time!\*\*\_

Even though 77% of mums want to return to work following their maternity break only about 2% of all job-share vacancies get filled and many mums end up working part-time in lower-paid lower-qualified jobs. Why is it that despite there being supply and demand, not more job-share positions are filled?

The reason has to do with a "triple coincidence". For a job-share position to be filled three things must be given:

1. A job must be available in a location in-reach for potential candidates
2. Two mums that qualify for the job must be found at the same time
3. Those two mums must get along to work together

There is currently no system that can solve this triple coincidence to unlock the potential that job-sharing can have.

While traditional job-share platforms or company websites only advertise job-sharing opportunities and still rely on the "triple coincidence" for a job share to work and don't address the fear of a "bad match".

JOOSH will use Mush's network and IP of knowing how to build positive relationships between mothers and apply it to job-sharing so that within the same app mums can find, vet and apply for jobs with other mush-mums whom they trust. Through the JOOSH employer portal Employers get access to a larger talent pool, that increase diversity and inclusiveness of their teams, get more qualified applicants for any given job-share position and reduce the risk of a job-share breaking apart causing follow-on cost is minimised.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FLO-SAN LTD	Hand Sanitisation for deployment in high pedestrian flow areas	£92,634	£74,107
BRITISH ENGINES (UK) LIMITED		£212,729	£170,183
Northumbria University		£36,587	£36,587

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The project is to complete the development, testing and piloting of a new product to facilitate hand sanitisation in high footfall locations.

Hand hygiene is now an essential and permanent public health priority.

Current Government Guidance emphasises need for \*\*\* provision of automated hand sanitisation dispensers in public places \*\*\*

Take-up rates for hand sanitation in busy high-volume areas such as train stations are negligible with survey data showing less than 0.4% of people using "stop-and-dispense" sanitisation dispensers.

Solutions in place are simply not fit for purpose.

Traditional dispensers ("stop-and-dispense") disrupt the flow of people resulting in low take up. At full utilization queues would result which are impractical to facilitate even without social distancing.

"Stop-and-dispense" machines can process between 5 and 7 people per minute with a socially distanced queue requirement. A London Underground ticket gate can process over 45 people per minute.

The proposed project is to complete the development and testing of a unique product specifically designed for high people-flow environments. The key product design objectives are:

- \\* Process people at the same rate as a London Underground ticket barrier
- \\* Allow both hands to be sanitised without stopping, even if carrying a bag or phone.
- \\* Reduce wastage and overuse of sanitation chemicals by dispensing a consistent measure of water-based sanitiser in the most efficient manner possible
- \\* Eliminate use of single use plastic containers that are used in "stop-and-dispense" solutions.

The project has significant sustainability benefits including reduction of chemical wastes and, reduction of single use plastic containers.

The broader secondary market opportunities are significant, the UK has in excess of 50,000 Universities, Schools, Sports Facilities, Hospitals, Shopping Centres and major Supermarkets with foot flow levels exceeding 15.2 Bn/year.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE SMART CONTAINER COMPANY LTD	KegTracker Suite: piloting a user-centric software suite for an IoT device that helps create a zero-waste supply chain in the hospitality and draught beer industry	£174,969	£139,975

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The UK's hospitality and brewery sector is the hardest hit sector by the negative impact of COVID with nearly 73% of staff furloughed and 68% of staff at risk of being let go. Beer producer's sales fell 82%, and 65% stopped production---many will not manage the recovery.

\*\*\_The vision of The Smart Container Company's KegTracker project is to help the hospitality and draught beer industry to use this crisis as an opportunity to create long-term value-add and resiliency by creating a zero-waste supply chain.\_\*\*

The current way to distribute beer to retail outlets such as pubs is via kegs. However, this system also comes with its challenges:

1. Retail Wastage: Nearly 20% of each keg is lost due to spoilage, theft, and poor handling
2. Poor Route Deliveries: Up to 50% of supply chain cost due to inefficient delivery routes
3. Manual Stock Control: Manual handling of inventory causes poor storage control
4. Blind Forecasting: 39% demand forecasting error b/c of lacking supply chain visibility
5. Product Spoilage: Poor temperature control causes 5% of inventory to spoil
6. Lost & Damaged Assets: 15% of kegs get lost or damaged each year

The cost of those problems to the industry add up to a total of £5bn/year---but the cost to the environment through wastage of water other resources and very high carbon footprint of beer is even higher.

Following 2 years of research The Smart Container Company TSCC has invented the patent-pending KegTracker IoT device which can be added to any standard-size keg and continuously monitor temperature, volume, and location. The KegTracker Suite will use data from the KegTracker IoT device to provide an End-to-End software solution helping the entire beer supply chain to know where a keg is, what's the capacity level, how much is consumed and what's the temperature.

This will transform the way that keg management, retail waste management, market intelligence and delivery optimisation can be done---and most importantly improve the carbon footprint of the industry:

\*\*\_Enabling a sustainable COVID recovery one pint at a time!\_\*\*

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TOUKANEYES LIMITED	OpenEyes Meet	£343,653	£171,826
THE APPERTA FOUNDATION C.I.C.		£147,228	£147,228

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 has necessitated expeditious adoption of telemedicine in Health Systems around the world. It has enabled care to continue to be provided within the context of appropriate social distancing, therefore helping to protect both patients and clinicians, as well as freeing up vital resources for the care of patients who have contracted the virus.

Telemedicine has long promised to resolve issues of access to health services for individuals who otherwise would need to travel such as those living in remote areas or people with physical disabilities. It also provides the basis for increasing the amount of care that can be provided in the community which delivers significant health, social, environmental and economic benefit.

In an update in June 2020, the World Health Organisation reported that "globally 58% of countries are now using telemedicine to replace in-person consultations".

However, most telemedicine solutions do not directly connect to the patients' medical record and this lack of interconnection is creating the chance that important information could be missed from the patient record. There is currently only a manual approach to mitigate these risks and that requires senior clinicians to duplicate data entry to ensure the details captured in the video consultation are recorded in the patients' record. There is no current method to automate this.

The OpenEyes Meet project will resolve this issue by developing a secure, scalable integration between the telemedicine product and the medical record which will ensure all data is stored accurately. This will be implemented and evaluated in Ophthalmology first, due to the high volume of NHS visits for eye care services. The design of the solution will be clinically driven and will leverage investment already made in a successful prototype implemented in Scotland.

As a result, senior medical staff will no longer need to duplicate the data entry and so can focus on providing care to more people. The solution will ensure that tele-ophthalmology can continue to be supported at scale and that a significant proportion of the visits that patients need per year to take care of the eyes can continue at safe social distances.

The project team has significant experience in implementing health technology in the NHS. ToukanLabs Ltd will lead the project and are the global technical custodians of OpenEyes, and The Apperta foundation will collaborate and are a clinically-led, not for profit organisation that promotes open systems and standards for digital health and social care.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FAST2FIBRE LIMITED	TINFOIL - Trenchless Installation Fibre Optic Cable	£179,055	£143,244

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The Covid-19 pandemic has highlighted the importance of digital inclusion, and households and indirectly businesses, have become even more dependent on broadband connectivity. Data traffic has risen quickly and whilst it's assumed that data usage will fade away as lockdown restrictions ease; however, businesses having seen that employees can work effectively from home are reviewing the potential to reduce their office estate and property overheads. Fibre to the Premises (FTTP) enables superfast >30<300Mb and ultrafast >300Mb connection and enables equality, diversity and inclusion as people can access information, government services, work remotely, order product, food and services all from home quickly and reliably. Working from home and the reduction in commuting can deliver environmental benefits especially emissions from cars and videoconferencing is shown to take at most 6.7% of the energy/carbon of a face to face meeting.

FTTP is generally installed by slit trenching using a machine in rural areas or labour-intensive digging in urban centres. There are trenchless installation methods such as moleing; however, the impulse driven "mole" will penetrate and damage drains and building foundations. Slit trenching, damages tree roots, any unidentified buried utilities and requires road closures, permissions to dig and wayleaves which can delay installation by 1-2 years. Fast2Fibre is a leader in no-dig or trenchless fibre optic cable installation and proposes to commercialise the development of a new no-dig process it has invented which if successful will accelerate the installation of fibre optic broadband to the premises. Success also means that more users will receive the benefits of faster broadband promoting inclusivity and diversity and greater access to services and ability to work from home.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KORN WALL LIMITED	KwickPod: Enabling portable hygienic screening infrastructure for mobile healthcare	£216,274	£173,019

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

KwickPod will produce a mobile health infrastructure that allows services to provide healthcare in the community in a safe, cost-effective way during the Covid-19 pandemic. KwickPod will build upon previous research into care in the community, and will work with providers of mobile healthcare to develop an improved system to provide safe mobile healthcare. This is imperative, as Covid-19 has meant that people fear going into a hospital environment. This is matched with a need to provide healthcare in the community, including for Covid testing, for the dissemination of vaccines, and for regular healthcare practices that have to occur outside of hospitals so that spaces can be repurposed for Covid. Additionally, Covid-19 has created a need to provide care within nursing homes, rather than bringing patients into a hospital. This is in order to reduce the likelihood that a patient is infected in a hospital setting, and brings the virus back into a nursing home.

Existing mobile healthcare infrastructure often is not designed to use materials that are suitable for reducing the spread of infection, or easy to clean. Additionally, despite the need to be portable and easy to set up or collapse before or after a clinic, mobile healthcare infrastructure that exists on the market is normally complex to set up, taking large amounts of time to complete the process. KwickPod's system will instead enable the rapid mobilisation of Covid-secure mobile healthcare. The system will allow for existing internal spaces to be repurposed to fulfil temporary healthcare needs.

The KwickPod system is derived from a previous working prototype system, and it will improve upon this system by creating a new screening storage and delivery system that enables up to 42m of hygienic screening and creates 8 infectious control privacy pods that can be set up by a single person in 10 minutes. The system will be produced on scale in order to meet the needs of Covid-19.

KwickPod will analyse the short-term and long-term needs of mobile healthcare delivery providers during the Covid-19 pandemic, in order to provide vital insights on how to optimally deliver mobile healthcare through methods by which patients feel safe and the spread of infection is reduced. It will then use these insights to redesign Korn Wall's existing mobile healthcare system in order to create an improved system that meets the needs of mobile healthcare providers during the pandemic.

The KwickPod team will feature two partners. The lead organisation, Korn Wall Ltd., is an expert on designing, manufacturing and disseminating portable infectious control screens, which will be the basis of the project's new system. Tente is the leading producer of castors and wheels for the medical and airline industry. It's castors are also used in a range of other sectors, and the company are experts on creating auto-lock braking systems and power assisted wheels.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DIREK LTD	SIMS: Smart Indoor Management System	£153,609	£122,887
HILSON MORAN PARTNERSHIP LIMITED		£108,306	£86,645

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

To stop the spread of Coronavirus, people around the world are practicing social distancing and should avoid close contact with anyone they do not live with. In order to maximise the number of people who can return to work safely, employers must make the workplace as safe as possible for staff, customers and anyone else who visits. This raises a need for a smart system to analyse how occupants use and move around building.

DIREK, along with Hilson Moran are developing and testing the Smart Indoor Management System (SIMS), which enables building operators and occupants to monitor real-time movement within building and send any relevant notification regarding the number of occupants. Existing tracking technologies rely on mobile apps or wearing other smart devices, whilst SIMS rely on smart sensors which are sensitive to people's presence and activity and are low-energy, low-cost, and easy to deploy. The advantage of using SIMS compared to conventional sensors, thermal and infrared cameras is that it does not require any user device involvement and at the same time does not capture sensitive information.

In addition to social distancing, SIMS can be integrated with the Building Management System (BMS) in smart buildings to optimise energy consumption and reduce carbon footprint. BMS is a computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipment such as ventilation, lighting, power systems, fire systems, and security systems. One of the significant variables which can lead to under or over prediction is usage profiles. Having increased understanding of occupational densities and when people enter and leave a building is crucial to helping to improve the design and operation and ultimately help meet the UK's zero carbon agenda.

To achieve the above, we need to address three challenges: 1) accurate estimation of propagation characteristics of signals 2) correlate propagation characteristics to activity and occupancy level 3) Feed the BMS system with the appropriate command.

As part of the initial phase of the project Hilson Moran would look to install the SIMS technology in one or more of their offices in the UK. This would allow the technology to be tested in a real working environment. We would also look to reach out the building operators to gather information on the plant operation to see if there are opportunities for increased building efficiencies based on this data. At this stage we would also look to work with BMS providers to look at integrating SIMS with the wider building systems.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KINAEISIS LIMITED	Kinaesis Acutect: A revolutionary platform to accelerate the migration of legacy manual processes to improve the compliance and competitiveness of the financial services sector.	£235,135	£174,000

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*Public Description\*\***

Kinaesis Ltd. is a UK SME founded by Simon Trewin (Financial Services Leader) and Allan Eyears (Financial Services Data Guru). Kinaesis is solving a substantial unmet need. End-users need the ability to analyse and flexibly model their dynamic business problems. The resulting consolidation, reporting, and analysis of data in End User Computing (EUC) applications such as Microsoft Excel, are inefficient, manual, and prone to data quality issues. This causes lost opportunity, increased risk, and financial loss, as well as engendering a 'follow the market' rather than a 'lead the market' attitude. It is estimated that around 80% of the operational budget targets managing complex 'business as usual' processes. COVID-19 has highlighted the need for automated procedures, together with the need to prioritise work to enable better access to data from remote locations. The product accelerates the migration of legacy manual processes and improves compliance and the competitiveness of the financial services sector.

The deployment model allows for remote working, reducing global carbon footprint and leveraging scalable cloud technology.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BCRE8IVE LTD	Artists Online	£51,006	£40,805
NETREADY LIMITED		£74,327	£59,462

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

**\*\*Covid-19 has destroyed markets for artists and makers\*\*** - predominantly sole traders, throughout the UK. This has been particularly true of artists based in tourist areas. In these locations the usual outlets - small galleries, cafes, summer shows etc have not been available. Even when tourists return many of these exhibition spaces will not.

The specific aim of this project is to create **\*\*a new digital support network for artists and makers\*\*** (incl. visual artists, illustrators, craft makers, ceramicists, photographers etc.), whose route to market has been devastated by COVID-19. This will be achieved by a survey of artists, the building of an online service, UX exercises, SEO optimisation, and web-based marketing to provide new opportunities for sole traders and micro-companies in the arts and maker sector.

**\*\*\*** Despite a rapidly growing volume in sales in the last 10 years, the art market has lagged behind other industries in terms of online share by value, and price levels... **\*\*\*** (The Global Art Market 2020: UBS, 2020).

With respect to inclusion **\*\*Artists Online is launching in a predominately rural area\*\***, and a geographically challenging part of the South West of England. This pilot project can act as a potential national support network for dispersed and diverse communities across the UK.

Artists and makers face restrictions on their potential income from **\*\*a lack of time, and financial resources\*\***. The average artists income from their art practice was £6,020 in 2017. While 7% earned more than £20,000; 66% of artists earned less than £5,000 from their art practice; 36% earned less than £1,000 and 69% had other jobs. (Livelihood of Artist: tbr, Dec 2018)

Artists and makers in rural areas face **\*\*additional problems\*\*** e.g extra travel costs, poor networking, the lack of local support or any national voice (Creative Freelancers: CIF, 2017). In addition, national business support schemes have consistently failed to reach this sector of the UK economy. (7 Steps to Increasing IP Content Investment: BCre8ive. July 2020.)

An online solution not only provides new routes to market, new sector specific business support, and minimises the artists need for additional resources, but it also **\*\*decarbonises\*\*** much of the existing routes and services i.e. less travel, transporting of work, gallery space, etc..

Existing online services take the form of online galleries e.g. Saatchi Art, arts markets e.g. Artsy and artist's own websites. None of these provides the range of services required for individual artists to scale up, and reach new markets on their own

**\*\*BCre8ive and Netready, two UK based companies\*\***, have worked over the last eight years on building and running innovative online support for emerging talent working with Warp Films, Aardman Animation and SelfMadeHero.

The future ambition of the project is to **\*\*increase the share of global sales\*\*** by UK based artists and makers. Craft goods worth £4.84bn were exported from the UK in 2017.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

July 2020)

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ORGANLIKE LIMITED	Hyperreal Organlike Models for Enhanced Surgical-Training during and post-COVID-19 (HOMES-Training)	£109,144	£87,315
NHS Highland		£28,269	£28,269
University of Strathclyde		£24,007	£24,007
VIVOLUTION LTD		£18,000	£14,400

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Due to the current COVID-19 pandemic, the provision of surgical training has been severely disrupted with most training activities (in hospitals, medical schools, training centres and medical device companies) either postponed or cancelled. This will have a profound effect on long term healthcare provision.

OrganLike is developing "hyper-realistic" synthetic models of human organs and blood vessels and working with the Royal College of Surgeons of Edinburgh (RCSEd) and NHS Highland to use this technology in routine surgical training. These models are an alternative to using human cadavers or animal tissues - which has been the normal means for training surgeons for centuries. Training has been invariably conducted in hospitals, medical schools, facilities of medical device companies - all of which have the necessary facilities and authorisation for the storage and use of human tissues and body parts.

The project will accelerate the development of remote training of surgeons using synthetic models which do not require any of the complex facilities needed to work with human tissue. The physical materials can be delivered by post to the trainee wherever they are in the world, while the teaching component of the training delivered on-line. As the physical materials are standardised, they can be readily integrated with existing Augmented Reality technologies to enhance the training experience.

In the project, materials will be evaluated by surgeons training with RCSEd in the UK and also evaluated by trainee surgeons in Kenya, Malawi and Zimbabwe.

The project will demonstrate

- \* the central role for OrganLike's hyper-realistic synthetic models from surgical training.
- \* the "doability" of remote training for surgeons,
- \* the capacity to introduce enhanced training techniques previously developed for other training application, such as AR,
- \* the capacity to increase training internationally.

The project represents a very clear example of how the Covid-19 pandemic can lead to accelerated adoption of new techniques -- in this case for a teaching approach which has changed little since the development of modern surgery. The need for traditional training will remain, but this technology will reduce the need for travel to centralised facilities, make training more accessible in Low and Middle Income Countries and provide the platform for more advanced training in the future.

It will also enable the RCSEd to continue to be at the forefront of surgical development, which it has been doing since it was founded in 1505\.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
APPLEGATE MARKETPLACE LTD.	Regional Supply Hub	£118,319	£94,655
GHYSTON LIMITED		£116,267	£93,014
University of Exeter		£23,817	£23,817

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

A project to establish a regional supply hub, using Artificial Intelligence to match suppliers to requests and enabling councils, charities and businesses to buy local.

This will develop innovative applications of AI, teaching the machine to avoid learning inappropriate discrimination from humans (so making the platform suitable for public procurement) and combining geographic proximity with other factors to determine which suppliers best meet the buyer's needs.

The project builds extensively on prior development of AI systems and uses existing collaborations, so reducing the project risk and increasing the probability of successful implementation and exploitation. It is led by Applegate Marketplace Ltd, partnering with Ghyston Ltd and the University of Exeter Institute of Data Science and Artificial Intelligence.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SPORTLIGHT TECHNOLOGY LTD	Sportlight - Fully Automated Stadium Tracking (FAST)	£283,950	£170,370

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Sportlight are developing the next generation of tracking technology for elite sports teams. Working closely with clubs, this project will enable accurate monitoring of players and will enable Sportlight to provide new and unique insights to clubs.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CAMVERTEC LIMITED	Reducing the levelised cost of energy (LCOE) in offshore wind through a disruptive silicon carbide converter technology, SiCtek	£207,351	£165,881

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

There are substantial global market potentials for offshore wind if the Levelised Cost of Energy (LCOE) could become competitive with alternative low-carbon power generations. The power electronics converter is a major component in offshore turbine drivetrains and power transmission via High Voltage DC (HVDC) networks. The efficiency and economics of market dominating Silicon-based converters have plateaued, but recently introduced compound semiconductors such as Silicon Carbide (SiC) have the potential to deliver radical improvements to performance, reliability and economics of converters. This project aims to prove and demonstrate the benefits and economics of a SiC converter technology through design, build and testing of a 50 kW prototype converter as a building block for large-scale converters for offshore and HVDC applications.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STAHT LIMITED	An Innovative IoT-based software platform utilising AI and Machine learning to optimise working practices within the construction industry	£209,924	£167,939

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Staht Ltd. (Staht) was founded by Robert Hirst. The impact of COVID-19 on the UK's construction industry has been devastating. As a result, a recent study by CEBR discovered that the construction industry has been losing roughly £301.5M a day during the pandemic. Staht aims to build a digital software platform that will offer a suite of software applications that can capture geo-located feeds of data from measurement sensors on physical testing devices. This will help to optimise processes related to the construction industry's safety testing, and also reduce manual processes, on-site attendance, and associated logistical considerations.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ETEU TECHNOLOGIES LTD	Blockchain-based platform for the exchange of shipping documentation to improve logistics operations while reducing overhead costs and the use of paper-based systems	£147,097	£117,678

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

eTEU Technologies Ltd. was created by Eduard Oboimov, Kristian Volohhonski, and Mykhaylo Lepekha. eTEU aims to create a solution that could result in savings of £100M for UK SMEs, with regards to their administrative overhead costs. The costs associated with inefficient paper-based documentation that is used in shipping are estimated to reach up to 20% of the actual price of the shipment. Though big companies can use proprietary blockchain solutions to manage such costs, SMEs do not have the technical skills or the budget to effectively manage such costs. eTEU's solution is a cheaper blockchain-based shipping platform that can be used for documentation.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
POBBLE EDUCATION LTD	Pobble Online Moderation Tool	£274,513	£172,943
North Yorkshire County Council		£113,131	£83,717

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*The problem\*\***

Education was one of the hardest hit industries by COVID-19. This is partly due to the highly interactive, "offline" nature of many educational activities. English writing assessment moderation in Key Stage 1 (KS1) and 2 (KS2) is a clear example of this.

Moderation involves teachers and moderators physically meeting up to discuss children's writing from physical books to ensure benchmarking and consistency. Moderation activities occur across four main areas, all of which are delivered offline:

- \* Training of moderators and year 2 and 6 teachers by local authorities (LAs).
- \* School-to-school moderation sessions between neighbouring schools.
- \* The provision of external moderation services to schools by LAs and commercial organisations.
- \* Statutory moderation for a percentage of schools at end of Key Stage by LAs.

Schools and LAs in England spend over £40m on moderation activities annually.

Social distancing requirements and a focus on the protection of vulnerable parties may make moderation in its current form unworkable. Despite this, the Government confirmed that statutory moderation should proceed in the 2020/21 school year. This project seeks to provide an alternative solution to ensure that statutory and non-statutory moderation activities can proceed as planned, given social distancing constraints.

### **\*\*The solution\*\***

Pobble is an award-winning, cloud-based software solution for teaching writing in primary schools with hundreds of thousands of users and paying customers in ten countries. We are a recipient of the Department for Education's Edtech Innovation Fund to develop our formative assessment-based pupil tools. We propose to enhance our existing offering by adding a tool for teachers to undertake writing assessment judgements, and moderation online.

The current offline moderation process has some inefficiencies. Our innovation aims to save money, reduce teacher workload, reduce car miles driven and reduce CO2 emissions.

### **\*\*The proposal and why it is innovative\*\***

This proposal is business led, by a UK SME (Pobble Education Ltd), and the R&D will take place within the UK. We are collaborating with North Yorkshire Local Authority (NYLA) who have a responsibility for KS1 and KS2 statutory moderation processes across over 350 LA maintained primary schools and academies. They will measure and evaluate the direct impact of the innovation on their activities during the course of the project.

The proposal is innovative because it builds on our existing platform to bring the benefits of modern digital technologies to bear on a distinctly analogue, pre-

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

digital process.

Achieving a solution for remote moderation provides an opportunity to support the annual statutory moderation process required by the Standards and Testing Agency (STA) for end of Key Stage assessment. It also has the potential to create new markets for remote moderation services in schools across the UK and the world. This builds on the UK's reputation as a world leader in education and edtech.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TOUCH FANTASTIC LIMITED	Harnessing blended learning data to address the education and attainment gap as a result of Covid-19	£218,535	£174,828

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

One of the most significant impacts of COVID-19 on the long-term future of the UK has been on the education of our young people.

Lockdown is understood to have created two significant types of impacts on students. The first is the attainment/progress gap in the sense of lost learning. Contributing factors to the level of impact are likely to include the particular school's quality and quantity of remote education (or face-to-face provision for vulnerable/key workers' children), the quality and quantity of home learning by parents, and a variety of home background factors including socio-economic, physical environment, access to technology and resources etc.

The second type of impact is psychological/interpersonal/developmental. Young people, particularly those who have not been in school throughout lockdown may have also lost acclimation to the school learning environment, structures and routines; interactions with peers; and interactions with teachers. This lost acclimatisation, alongside other difficulties of lockdown life, may have affected their ability to recover lost learning, wider psychosocial development, and mental health/wellbeing.

These gaps and factors are currently hypothesised but the extent to which they have affected young people over lockdown is not yet well understood or evidenced. Gathering this understanding and evidence is crucial to ensure the current cohort of students do not become a lost generation, with long term detrimental effects on them, wider society, and the national workforce and economy.

We have a unique opportunity at this moment in history to analyse learning and development gaps in school children through the use of remote/blended learning data. Never has so much educational activity taken place on digital learning platforms as over the past few months.

Sparkjar -- our world-leading UK-based blended learning platform for schools -- saw +700% in usage during lockdown. Throughout lockdown, our two testbed secondary schools using have run full teaching timetables throughout, exchanged 170,000+ messages, set 9,000+ assignments, and 69,000+ pieces of work have been submitted by students.

Not only is this quantity of data remarkable, but its quality and completeness are unprecedented because the schools have been using Sparkjar as their primary means of interaction for a number of months. Never before has there been a data set as rich to analyse patterns in learning and behaviour in the context of mainstream education.

At the same time, we are at a point where the fields of machine learning and big data permit an unprecedented depth of analysis of large data sets.

Our vision is to harness the power and value of this unique data, providing schools with a realtime dashboard of insights into student learning, progress, behaviour and mental wellbeing. We call this Sparkjar Realtime Insights (SRI). We will leverage cutting-edge machine learning, expert systems, statistical analysis and data visualisation in order to spot patterns and anomalies, and provide realtime actionable insights at three levels of granularity: individual student, student groups, and whole-school. This will represent a quantum leap in school data analysis for schools when compared to current best practice of termly manual reporting and spreadsheet analysis.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
JELLYBOOKS LTD	Virtual Book Browsing and AI-powered Book Recommendations	£215,789	£172,631
BLACKWELL UK LIMITED		£23,953	£19,162

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The project "Virtual Book Browsing and AI-powered Book Discovery" will provide UK bookshops and booksellers with innovative tools and services, such as look-inside, read later and a white-label AI-powered book recommendation service to enhance their online and ecommerce capabilities post pandemic.

The project is a partnership between publishing technology specialist Jellybooks and bookseller Blackwell's, the UK's second largest physical book chain, who will also be the pilot partner in this project.

At the core of the project is a national ebook sample infrastructure open to any UK bookshop or bookseller. This platform will support online browsing of the first 5% to 20% of a book (look-inside) including offline reading support (read later). Every book sample featured will have an integrated buy link offering users the option from within the book to purchase a digital or physical version (click-to-buy), including the option of in-store pick-up (click & collect).

The platform will use the Jellybooks retailer localisation engine to operate as a closed-loop system. This means that, unlike alternative solutions, an ebook sample offered and distributed by retailer A only has buy links to the same retailer A and not competing retailers B and C even though B and C may be using the platform for their own purposes as well, even selling the same books.

Consumers will not be required to download an ebook file or install an app. Instead the platform will leverage the state-of-the-art Jellybooks Cloud Reader to support reading in the cloud on any connected device with browser support. The Jellybooks Cloud Reader is based on the open ePub standard and is able to support visually impaired readers and other readers with accessibility requirements.

Data collected across retailers via the national platform will be used to develop and train machine learning algorithms (colloquially referred to as artificial intelligence or AI). The goal is to identify taste clusters allowing for better and more accurate category description of books. The use of observational user data will correct for inherent industry biases and errors in existing classification systems, support a greater diversity of authors and voices, and reduce the marginalisation of audiences and authors that can occur in the current mass-market focused system.

The machine learning algorithms will also be deployed to create a book recommendation engine for book retailers and publishers. This will take the shape of a white-label direct-to-consumer newsletter service that will generate AI-powered book recommendations specific to individual users, communities, and audience niches. In short, the service will offer a Netflix-style recommendation engine adapted and optimised for the decentralised needs of independent book retailers, a major innovation.

The platform will also be used to nudge users towards the purchase path generating the least packaging waste and the smallest carbon footprint in terms of book delivery.

The project pilot will open to end users at the beginning of 2021\.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MIMICA LAB LTD	Introducing Mimica Touch to supermarkets to cut food waste and mitigate COVID-19 disruption to the food industry	£214,896	£171,917

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has disrupted the global food industry, with the UN warning that the world is facing the worst food crisis in half a century. Food waste expert, Kevin Quigley, has cautioned that the UK could now miss its Sustainable Development Goal of halving food waste by 2030. Globally a third of food produced is wasted (FAO, 2015), with 60% of it still safe for consumption.

A major issue is confusing and overcautious expiry dates, leading to perfectly edible food being thrown away. Food waste at European supermarkets can be as high as 15% (tandfonline.com), with 80% attributed to the current expiry date system and the average family in the UK wastes £700 worth of food annually. According to Andre Laperriere, Executive Director of GODAN, COVID-19 may lead to levels of food waste in developed economies increasing to 40% of everything that is produced, distributed and consumed. Countless food producers and retailers have pledged to tackle food waste, but COVID-19 has forced them to look at different ways of operating. Mimica products will give the food industry the confidence to manage stock levels and wastage, whilst also giving consumers the confidence to purchase fresh foods.

Our first product Mimica Touch is a patented label or cap that turns bumpy when food or drinks spoil, based on storage temperature conditions. It provides an accurate, real-time indication of the product's freshness with a tactile inclusive interface. This time & temperature response can be calibrated to different food types to suit food suppliers' requirements.

This project will support Mimica's commercial production and market validation in the juice-based beverages market with our first version (bottle cap) of Mimica Touch. Lead players in this market have offered strong support and engagement, and have expressed a clear need for the technology. This will establish its market position with an offer that is affordable, accurate, inclusive and circular economy compatible, which existing offerings cannot match. Simultaneously, Mimica's technical team will conduct early research into a novel universal flat label design to capture a broader range of products.

Our Mimica Touch solution will contribute to rebuilding a more sustainable economy by supporting retailers and consumers, whilst simultaneously striving to achieve our mission of reducing global food waste.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CLIMATE SOLUTIONS EXCHANGE LIMITED	Climate Solutions Exchange Ltd	£196,710	£157,368
FOLARITY LTD		£137,896	£110,317
REVEL INNOVATION LTD		£163,138	£130,510

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The Covid-19 pandemic has accentuated the Climate Emergency and the need for a Green Recovery, accelerating the requirement for the business world to de-carbonise and become more environmentally sustainable; whilst also enabling landowners to transform their agricultural and land management practices.

Climate Solutions Exchange Ltd (CS-Ex) aims to break down the current barriers to entry and democratise the voluntary carbon markets, by enabling the accurate and affordable measurement of carbon sequestration, rather than the costly processes and systems currently in place, which are based on models and assumptions.

CS-Ex's aim is to significantly increase quantities of carbon brought to the voluntary market and help satisfy the increasing demand for carbon offsetting. Through the use of technology, CS-Ex intends to turn carbon offsetting MRV from 'Monitoring, Reporting & Verification' into '\_MEASUREMENT\_, Reporting & Verification'.

The project will achieve this by setting up 'Carbon Observatory' sites at woodland planting, regenerative farming and peatland restoration projects in the UK. The sites will have their carbon levels measured and calibrated by satellite and drone Earth Observation (EO), machine learning (ML), and ground based measurements techniques.

By successfully measuring carbon, CS-Ex intends to enable: the measurement, monitoring and audit of land managers' Natural Capital production; the sale of measured carbon; and the planning of wider Natural Capital interventions.

Reacting to the recent Covid-19 pandemic, key drivers of this project are: the latent opportunities presented by the potential 'circular carbon economy' that can assist the rural sector in recovering from the Covid-19 pandemic with new income streams from Natural Capital payments; establishing new highly skilled jobs in remote sensing EO technologies; and to de-risk the potential impact of a second Covid wave by enabling remote sensing technology to deliver the monitoring results needed without the need for significant people movement between survey sites.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SIMPRINTS TECHNOLOGY LIMITED	Biometric facial recognition tools for improved infection control in COVID-19 response	£218,731	£174,985

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In the absence of a vaccine or robust treatment protocol, effective case management is one of the best tools to combat COVID-19. Case management is the process of monitoring a patient's care, including screening, testing, treatment, and discharge. Reliable case management helps enable better patient outcomes, stop the spread of the virus, and ensure that accurate data to combat the disease are available to programme staff, policy makers, and researchers.

In high-income countries, formal IDs underpin individuals' health records, providing the basis for case management. However, according to the World Bank (2019), over 1.1 billion people worldwide (1 in 7 people globally) lack formal identification. Those living without identity are predominantly in lower-income countries, where the lack of identity combined with weaker health infrastructure makes case management and suppression of COVID-19 incredibly challenging.

In settings where formal IDs are not prevalent, [patient ID cards and barcodes][0] are commonly used for case management. However, physical ID cards can be a source of viral transmission and other methods of identifying patients are unreliable. [Names are not sufficiently unique][1] and are easily misspelled; [dates of birth may not be known][2]; and data entry errors are commonplace.

Although countries with poor health infrastructure are rapidly establishing makeshift testing, quarantine, isolation and treatment centres, without unique identifiers, managing confirmed cases remains a critical challenge. The lack of unique identifiers makes it difficult to: (1) [conduct contact tracing][3], (2) link individuals consistently to their test and treatment records, and (3) prevent duplicate records. Without a unique identifier, valuable time and resources may be wasted due to inaccurate patient records and unreliable data, compromising quality of care and costing lives. In addition, corruption enabled by weak monitoring mechanisms wastes billions every year. It is estimated that up to 29% of global development assistance is lost to corruption (Center for Global Development 2017). When total yearly investment in development assistance is as high as \$153B (OECD 2018), this means up to \$44B is lost every year.

Simprints is a tech company from the University of Cambridge that pioneers innovative solutions to verify coverage and impact, by building and deploying biometric identification systems in the hardest environments in the world. During the past few years, Simprints successfully developed a variety of biometric identification solutions for different applications, including an identification system based on fingerprint scanning that has been commercialised across 12 countries, and an image based biometric identification system (facial recognition) which is now at the start of commercialisation.

Currently the challenge for Simprints is to further facilitate the implementation and use of identification services at scale for COVID-19 response in developing countries, with systems that solve the current needs in this market. In particular, in this project Simprints proposes to research, develop, and validate :

- \* periocular facial recognition (which will work effectively when the nose and mouth are covered by a mask)
- \* Liveness detection (to prevent the fraudulent enrolment of 'ghost' beneficiaries from photographs)

[0]: [https://journals.lww.com/jaids/fulltext/2009/11011/\\_Talkin\\_\\_About\\_a\\_Revolution\\_\\_\\_How\\_Electronic.16.aspx](https://journals.lww.com/jaids/fulltext/2009/11011/_Talkin__About_a_Revolution___How_Electronic.16.aspx)

[1]: <http://ebooks.iospress.nl/publication/13402>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

[2]: <https://www.sciencedirect.com/science/article/pii/S138650560000068X?via%3Dihub>

[3]: <https://linkinghub.elsevier.com/retrieve/pii/S1201971215002593>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SYNTACOG LTD	AI-powered Health and Safety Compliance for Small Business	£220,686	£174,342

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

The Pocket Secure app will give small businesses a simple way to manage their health and safety plans in the COVID-19 era and beyond. The app will use artificial intelligence to automatically extract information from laws, government guidance and industry best practice, in order to provide rapid, personalised advice. It will make it easy for small businesses to deal with the overwhelming flow of regulatory information and meet their health and safety obligations.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WSP UK LIMITED	A Net Gain Planning Tool (NGPT) for a Green Recovery of the Built Environment Sector	£105,386	£84,309
ECOSYSTEMS KNOWLEDGE NETWORK		£25,325	£25,325

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

There are growing calls and policies demanding environmental net-gain from new developments. This is because the environment is increasingly seen as a valuable and multi-functional asset that benefits people's health, well-being and prosperity. Environmental net-gain is an approach to leave the natural environment in a measurably better state than before, in line with HM Government's 25 Year Environment Plan.

As recognized by the Prime Minister, the built environment is central to the recovery from the COVID-19 pandemic, as well as future sustainable growth. A key challenge for the built environment sector which is yet to be resolved is how environmental net-gain can be objectively measured and assessed.

The aim of this experimental research project lead by WSP and the Ecosystems Knowledge Network (EKN) is to co-develop a Net Gain Planning Tool (NGPT) to enable built environment professionals to objectively assess and measure to what extent new plans or developments achieve environmental net-gain. We will establish a strong cross-disciplinary partnership to develop the NGPT with the aim to become a widely accepted UK industry standard -- a game changer for the built environment sector. The NGPT will be made publicly available and free to use.

The NGPT-user will need to enter a range of simple indicators such as land-use and green space accessibility before and after development. On that basis the tool will calculate the impact of the land-use change on up to 20 ecosystem services, physical and mental health, biodiversity and assess to what extent environmental net-gain has been achieved. The biodiversity assessment will only apply outside England as England already has a tool to assess biodiversity net-gain.

Some tools to assess the impact of land-use changes on environmental services are already available and provide a springboard for the NGPT development. However, none of these tools answers the crucial question of whether environmental net-gain has been achieved.

The NGPT will advance existing tools by combining the best features of existing tools, adding value by for example also assessing physical and mental health benefits, being evidence-based and yet easy to use, providing outcomes that are easy to interpret, answering the critical question of whether a plan or development achieves environmental net-gain based on national and local policies, allowing local planning authorities to pre-define what is expected from new development in terms of net-gain which will also enhance planning security for developers, setting incentives for going above and beyond minimum net-gain requirements, and becoming a widely accepted industry standard co-developed with the sector.

Overall, the NGPT will not only help to make future land-use more sustainable, but also to enable the built environment sector to play a more positive role by becoming a net-contributor to tackling environmental issues -- a potential game-changer for the sector as well as people and wildlife in the UK and beyond.

As we aim to establish a sector-wide partnership to co-develop the NGPT, we invite interested built environment professionals and stakeholders to contact our project manager Oliver Hoelzinger ([oliver.hoelzinger@wsp.com](mailto:oliver.hoelzinger@wsp.com)) regarding involvement opportunities.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CRAFTSMAN TOOLS LIMITED	Development of a world-leading innovative new workholding solution for the manufacture of Electric Vehicle drivetrain components.	£149,963	£119,970

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Advanced manufacturing is essential to the UK economy. The following extracts are from 'The UK Government Industrial Strategy, June 2019';

"The UK automotive sector is a great success story. It is hugely important to the UK economy ... it employs 159,000 people directly in vehicle manufacturing, with an additional 238,000 in the supply chain, most outside London and the South East "

Covid 19 has had a massive negative effect on this industry. Travel restrictions have resulted in massive financial and job losses. Figures from the Manufacturing Technologies Association show that the production of cars in the UK fell by 99.7% between February and April.

Advanced Manufacturing Industries use sophisticated machine tools. Craftsman Tools an SME based in West Yorkshire, designs and manufactures workholding equipment (the device that locates and clamps the component on to the machine tool)

Like most companies in Advanced Manufacturing Craftsman has seen its order intake reduce significantly resulting from Covid 19, this has put a financial strain on Craftsman.

This project will enable Craftsman to use its expertise to design and develop a new workholding concept initially targeted at the companies who produce electric vehicles. The device will enable a friction welding process to bind the drive shaft to individual motors. Critically we will be developing work holding equipment which will last in the harsh manufacturing environment to ensure the required geometrical tolerances can be achieved. This is essential in efficient transfer of power from the electric motor to the wheel.

Currently the drive shafts are produced by subtractive machining (metal is removed to produce the required shape). The proposed development will reduce the cost of production, increase the strength of the drive shaft, and marginally reduce the amount of energy required to produce the part.

Once a successful device has been developed, we intend to target all companies who are producing electric vehicles. In 2019 the sales of electric cars increased by 25%. It is expected the long-term growth will be significantly more.

Electric vehicles will be crucial in achieving the government target of 'net zero greenhouse emissions.

We are a company who actively pursues, equality, diversity, and inclusion in our organisation and our approach to innovation.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Ionix Advanced Technologies Ltd	Remote, in-service defect monitoring in power generation assets to recover sustainable productivity from Covid-19	£173,572	£138,858

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

With Covid-19 causing significant limitations on asset integrity inspections due to travel restrictions, social distancing and redundancies of key, trained inspection staff, it has left many critical facilities, such as power generation (including nuclear and renewables) infrastructure at increased risk of failure and unscheduled outage. Covid has also caused a significant 22% drop in electricity demand from reduced commercial and industrial operations, forcing many stochastic renewables sources such as wind to be stopped, as well as new builds being cancelled or delayed, causing a 6% increase in efficient closed-cycle-gas-turbine (CCGT) plants to offer flexibility and grid resilience due to the changeable supply and demand requirements. This increases reliance on ageing power generation assets which require more frequent inspection to prevent forced outages.

Statutory asset integrity inspection and fitness for service is required to justify safe and efficient operation between shutdowns and service intervals under the Pressure Systems Safety Regulations (PSSR) 2000, Office for Nuclear Regulation (ONR) and to meet climate legislation such as the Large Combustion Plant Directive.

Cracks, flaws and defects in metals and welds contribute to 77% of unscheduled outages, which have significant impacts on availability to the grid as well as huge costs running in to £M's per day of lost productivity and direct costs which are passed on to the consumer. The loss in thermal efficiency due to leaks and steam loss contributes to an equivalent increase of 1-2 kTonnes of carbon dioxide per hour in UK emissions.

Inspection is typically managed on these types of infrastructure using non-destructive methods such as ultrasonic testing (UT) which offers high accuracy, penetrating power and sensitivity with non-hazardous, economical hardware to directly detect, size and characterise flaws and defects within critical components such as pipes, reactor vessels and heat exchangers.

The implementation of NDT inspections & subsequent maintenance is routinely undertaken around planned shutdowns when assets are cool and/or isolated. This often involves an order of magnitude increase in personnel presence on site to cover as much infrastructure as possible to limit the costly outage duration.

Ionix will develop a pre-production prototype of a new ultrasonic sensor in this project, capable of the continuous monitoring of defects and flaws in alloy steel components, up to 600 C, removing the need for shutdowns to take measurements and allowing continued plant operation. These new high-temperature defect sensors will be connected to commercial WirelessHART ultrasonic nodes to be immediately accessible to power generation asset integrity end-users remotely.

The project will result in a prototype to demonstrate the key deliverables, engage with service providers and end-user operators to prove the technology and enable Ionix to proceed to manufacture and productionisation. If successful, an eventual product will result in greater asset intelligence on the 32 CCGT (42% of UK electricity generation) and 14 Nuclear power plants in the UK, to defer maintenance and justify cleaner more efficient operation of existing plant.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LUCID GROUP LIMITED	Zero - a connected device and service to accelerate child and adolescent bladder continence - reducing the environmental impacts of incontinence	£188,868	£151,094
ABOVE MOBILE LIMITED		£55,320	£44,256
DISABLED LIVING		£96,074	£76,859

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The Zero project aims to demonstrate the opportunity to deliver effective, connected and self-care remotely, addressing negative COVID-19 impacts on continence services facing restrictions provide the face-to-face advice and training to help young-people and carers. Resultant acceleration of developmental and disability related bladder-continence could deliver significant carbon-footprint, greenhouse and gas reduction along-side a scalable business model that addresses world-wide healthcare commissioner priorities.

Zero envisages patient, carer and clinician and medical device expert co-creation of a new system of products and services

The project partners involved have collaborated over several Years in successful medical device systems development

Project objectives align to the NHS Long-Term-Plan, prioritising of digitally enabled, patient self-management and remote care. The product range and service envisaged fits continence-care pathways, UK and international reimbursement models.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FLOW TECHNOLOGIES LTD	Flow Technologies Concept Trial - COVID-19 Action	£105,474	£84,379

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In this time of social distancing, managing people's movements is vital. Flow is an app that tells people when places (any type of establishment) are quiet/busy in real-time with incredible accuracy.

During the COVID-19 pandemic, social distancing is crucial. Flow will greatly benefit consumers, allowing them to see when establishments are quiet/busy (getting notified with the best time to go) in real-time before they go, assisting with social distancing. Flow also greatly benefits the establishments (e.g. supermarkets/pharmacies/other essential outlets), allowing them to accurately track their footfall data in real-time. This data can be used to make informed decisions on staffing, let their customers know when it is too busy/the best time to go, and more. This type of real-time data is also extremely useful for the government when analysing people's movements and managing infection rates through social distancing. In short, during the pandemic, Flow is an essential tool for social distancing. After the pandemic, Flow remains as useful to business owners and consumers, helping them save time and money and maximising occupancy.

The project will involve developing the Flow app, installing the sensors into confirmed trial locations such as cafés, barbershops, supermarkets, university facilities, and gyms, and releasing the app for consumers to see when these outlets are quiet.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRIBOSONICS LTD	Novel Embedded Sensing Technology for Smart Tubes and Connectors	£191,710	£153,368

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Tribosonics is an innovation led company located and forged in Sheffield, United Kingdom. It drives transformation by using its unique ultrasonic sensing technologies to address challenges in tribological contacts (wear, friction and lubrication). Using its unique Technology Stack, it provides data of unmatched information density at an embedded component level, with core measurement competencies in stress, lubricant film thickness, wear, fluid properties, contact pressure and non-destructive testing. Tribosonics have developed novel ultrasonic measurement technology for measuring seals in industrial applications, which can be applied to the automotive industry.

The Project's aim is to introduce an innovative emission control system to materially improve the environmental efficacy of automotive engines.

The automotive sector has been dramatically impacted by Covid-19. The automotive sector in the UK generates more than £100 billion per year in trade. Current forecasts predict £33.5 billion in production losses due to Covid-19. As of 01/06/2020 it is estimated that the production loss in Europe is 2,446,344 vehicles. Global passenger vehicle demand is expected to drop 20% in 2020, and Volkswagen announced losses of US\$2.2 billion per week of shutdown.

Much governmental support, aimed at stimulating the economic recovery, is tied to environmental sustainability: making existing vehicles less polluting, and accelerating the move to new vehicles that are inherently less polluting. The World Economic Forum (WEC) identifies regulatory change in the car sector as a key driver to help companies innovate and recover after the COVID-19 crisis. WEC also expects that the Covid-19 outbreak will accelerate industry consolidation and transformation. Worldwide, Europe has the most ambitious targets for reducing CO2 emissions with 95 g CO2/km in 2020/2021, again reduced by 15 % in 2025 and by 37,5 % by 2030.

In the face of the challenge of Covid-19 there is a real danger that without a significant number of innovations (this project being one of them) then these ambitious targets will have to be relaxed. This will result in a negative impact on environmental sustainability. This project will help solve these challenges: enabling a reduction in the pollution of combustion engines, and accelerating the development and deployment of hybrid electric/electric vehicles. This will be achieved through embedding Tribosonics' technology in engine components to make 'smart components' that will address and enable the reduction of emissions to meet the requirements of regulatory changes brought in to achieve the above goals.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MINICABIT LIMITED	Decarbonising the cab sector via enabler tools for any size fleet to accelerate their adoption of EV Cabs	£218,055	£174,444

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Taxis in the UK have increased their carbon emissions by over 25% in the last 10 years alone. However, in spite of the rise of ride hailing apps, the £9bn UK cab market is still mostly served by over 10,000 Private Hire (minicab) taxi firms, representing c100,000 cab drivers. Most of these cab firms are small/medium sized businesses with little or no technology, often run by staff of BAME background -- indeed, DfT reports that 40% of cab drivers in England/Wales are BAME (94% in London).

The Covid-19 lockdown has significantly impacted all the livelihoods of the cab industry, with bookings slowly returning yet subdued by a lack of corporate and airport transfer work. However, a green recovery via a shift towards decarbonised transport risks leaving the cab sector behind as its operators are woefully unprepared to adopt Zero Emission Electric Vehicle (EV) cabs. With their revenues impacted, the lack of data available for a 3 car fleet in a town or a 100 car fleet in a city to understand how to generate a Return on Investment from how they would use EVs (from an executive Tesla to a Nissan Leaf) is constraining their adoption, whilst range anxiety about EV battery ranges are limiting EVs to only local cab fares (rather than more lucrative airport or out of town trips), weakening their utilisation and hence their ROI case, a vicious cycle.

At the same time, consumers/businesses will only book EVs on scale if the pricing & availability of these cabs is normalised vs. regular cabs, a dynamic fleets don't have the tools to manage; and the fragmented nature of thousands of cab fleets means there is scarce data on tracking a transition to EV cabs for environmental/transport studies.

[minicabit.com][0] is Britain's largest cab aggregator with its tech platform and algorithms enabling consumers/businesses to compare and book 800+ cab firms (with over 20,000 drivers) in over 550 UK towns & cities. minicabit is uniquely placed via this project to

- \* help cash constrained, typically low tech cab firms & drivers, alongside the largest cab firms, diligently get a return from investing in EVs
- \* drive usage of EV cabs by consumers/businesses
- \* output unique data insights on EV cab usage for government, the transport sector and R&D bodies.

[0]: <http://minicabit.com/>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RPAIR LTD	The world's first fully digitalised marketplace for the jewellery/watch repairs industry.	£199,145	£159,316

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

RPAIR Ltd. is a UK-based SME that was founded by Michael Jakobsen, Paul Shone, Abbie Shone, and Dan Woodel. RPAIR aims to solve the unresolved need in the jewellery/watch repairs industry. Currently, this industry is heavily dependent on outdated systems, and thus offers its customers minimal transparency or flexibility with regards to prices and service quality. RPAIR is the first fully digitalised marketplace for the jewellery/watch repairs industry. Customers will be able to search and compare competitive quotes based on price, location, and customer reviews directly from their mobile device or desktop browser.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CELLUCOMP LIMITED	SafePack-Plastic/Flouro Free Food Contact Packaging	£214,892	£171,914

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

CelluComp will use its fully sustainable microfibrillated cellulose from vegetable waste streams - called Curran, to provide the specific barrier properties required for food packaging, without the use of plastic and/or fluorochemicals. Curran will be used as a mix in the paper pulp and as an additive for coatings. Along with outside consultancy, CelluComp has developed a ready-to-use barrier coating for food packaging.

Specifically, CelluComp will utilise its lab, outside consultancy and customer relations to prove the technical and sustainable viability of using Curran in food packaging. CelluComp will make hand sheets of paper for flat sheet applications using different levels of Curran, starches and other components to maximize paper quality suitable for different end applications in food packaging. CelluComp will measure strength, porosity, and the effects the Curran-based sheet will have on grease barrier, water vapour barrier and oxygen barrier. Once the most optimized sheets are produced, CelluComp will add coatings to this paper and commercial food contact papers and retest for the same properties.

CelluComp will also test Curran in paper products produced by moulded fibre production. As with the flat sheets, measurements for strength, porosity, cost and barrier will be considered. Curran-based coatings will also be tested on these moulded paper products. These tests will also be verified with potential end customers and at a larger scale.

At the end of the project, CelluComp will be able to gather important information on the best direction to focus its efforts in the food-packaging industry. It will aim to complete 1 piece of work leading to a concrete new packaging solution with a customer that will launch in the short term and produce immediate impact.

Finally, testing of biodegradation, LCA analysis and migration studies will take place to ensure the safety of the new packaging for food and register the impact on sustainability.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IRRESISTIBLE MATERIALS LTD	Next generation photo-resists for EUV lithography	£499,112	£174,689

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Irresistible Materials (IM) is developing next generation photo-resist materials for the semiconductor industry.

A photo-resist is used within the manufacturing process of microchips. It acts as a type of mask that enables patterns to be etched into silicon through a process known as lithography. It is these features etched into silicon that act as the 'wires' of the modern day microchip.

Resists are thus critical to the semiconductor industry, and the ever-decreasing size of microelectronics is possible only through continuous advancements in lithography and resist technologies. However, current lithography technology, where the radiation used is 193nm wavelength light, is reaching its limit, and is unable to meet industry targets past 2020 (the wavelength is too large for the targeted microchip feature sizes).

To address this, a new generation of lithography technology is being introduced in 2020, called Extreme Ultraviolet Lithography (EUV). In EUV lithography, the wavelength of the radiation is reduced to 13.5nm enabling higher resolution patterns, and thus smaller micro-chip features.

However, there is presently no resist solution that meets industry targets for EUV lithography past 2021 (current solutions only address the 2020 entry node). This creates a major need and opportunity within the semiconductor industry.

Through this project, IM will complete the Experimental Development of our patented EUV resist material to directly addresses this need and opportunity, and prepare the material for production scale up, and full context commercial pilot trials and subsequent commercial launch following project completion.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NUVECH SOLUTIONS LTD	Airbar-Q: Intelligent, Independent, Interactive Crowd Control in Retail and Hospitality Sectors	£178,429	£142,743
SPINKO LIMITED		£196,331	£157,065

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Nuvech Solutions, has developed a disruptive market product, focused on keeping people safe when working around vehicles. Its partner, Harrison Spinks (HS) is the UK's leading luxury bed manufacturer. Together, they will address a conundrum now facing high-street retailing:

How to manage social distancing queues without incurring significant additional labour costs and encourage hesitant shoppers to return.

The Airbar-Q will allow shops and venues to manage queues without the cost of staffing doorways. It will use intelligent software and smart components to interact with store systems and consumer mobile apps to bring confidence back to plan trips when there are the least likely social distancing issues.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LAING O'ROURKE SERVICES LIMITED	Better Greener Faster Facades	£213,013	£170,410
ETUDE CONSULTING LIMITED		£18,630	£14,904
RAMBOLL UK LIMITED		£144,682	£115,746

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*BETTER GREENER FASTER FACADES\*\***

The Prime Minister in his speech of 30 June 2020 outlined the UK Government strategy to support a post COVID-19 recovery to "build, build, build". This project supports that strategy through 'Better, Greener, Faster Facades' aimed primarily at the Education sector and supporting the schools building programme. In particular, this will enable much more productive and thermally efficient, sustainable components for the external walls of a school - which accounts for approximately 20% of the build cost - to be delivered to the project fully completed, and reducing the onsite workforce that currently needs to work in close proximity. The project will design, deliver and test a working prototype by June 2021 with a target of incorporating into the next wave of school building projects thereafter. The product and system will also have a wider application into other building sectors, include healthcare.

### **\*\*Outputs\*\***

The project outputs will include:

- Designed and tested Better, Greener, Faster Facade prototype
- A digitally configurable tool to enable the rapid design into new schools projects
- Evidence and sustainability analysis supporting the Better, Greener, Faster credentials of the system

### **\*\*Team\*\***

The project team (SME denoted\\*) is:

- Laing O'Rourke (lead) -- a leading construction, engineering and manufacturing enterprise
- Ramboll -- a leading design and engineering consultancy company with a deep understanding of the education sector and façade technology
- Etude\\* -- a sustainability consultant with focus on the built environment

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GOOD BOOST WELLBEING LIMITED	Computer-Vision aided community back pain Physiotherapy services	£259,167	£173,642
National Axial Spondyloarthritis Society		£18,086	£18,086
Oxford Brookes University		£75,595	£75,595

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Good Boost is a medical technology social enterprise supporting people living with MSK conditions in the UK. Good Boost positively impact users' health through the delivery of aquatic rehabilitation-exercise in public swimming pools and via its AI software on waterproof tablet computers.

In response to Covid-19, Good Boost has built upon its existing technology to design, build and deliver exercise software to be delivered in the safety and comfort of users' own homes. One-third of people living with an MSK condition are over 60-years old and a high proportion live with one or more long-term health condition such as diabetes or heart disease. As this population has an increased risk of health complications in the event of Covid-19 infection, it is essential that digital physiotherapy services are available at home. Due to the alteration and cancellation of physiotherapy and joint surgery services, Good Boost's individually-tailored rehabilitation exercises support the management of MSK conditions as the MSK health system work to overcome the challenges placed upon it by Covid-19.

The focus of the technology in this project is the development of computer-vision technology (artificial intelligence video analysis) to assess the functional function and movement of people with back pain. Back pain affects one-third of the UK population every year with a huge impact on the health service and economy. The computer-vision technology will use existing cameras on phones/tablets/webcams to assess an individual's movement and function and recommend tailored self-management advice and rehabilitation exercises based on the computer-vision spinal assessment. This project includes the development of further computer-vision assessment movement and functional tests to screen for more serious back pain conditions that fall under the category of Axial Spondyloarthritis (inflammatory spine arthritis). This life-long condition presents in the early twenties as 'regular' back pain. Due to its similarity to other non-serious back pain conditions, it has an average 8.5 year delay to diagnosis. The computer-vision system will enable the remote screening of these conditions following the best-practice in Physiotherapy movement assessment in screening and monitoring Axial Spondyloarthritis.

Good Boost comprises an expert team of clinical and technology specialists with a successful track record of developing and delivering medical software and community health services on a national scale. The computer-vision tool will be promoted as a digital tool in collaboration with musculoskeletal charities to maximise visibility and uptake. The tool will be free to use for initial assessment to ensure nationwide accessibility. For ongoing assessments and individually-tailored rehabilitation exercises, users have the option to subscribe to the monthly Good Boost app (£4 per month).

This high-value project will support thousands of people in their own home to significantly improve their back pain, function and quality of life in addition to reducing the delay to diagnosis for Axial Spondyloarthritis. The project will generate health cost savings and reduce the overall burden on the NHS during the pandemic and indefinitely provide a long-term community service that reduces car journeys and carbon emissions through remote physical function assessments.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RISQ VENTURES LIMITED	Developing a remote financial analysis service for lawyers involved in probate claims	£154,999	£123,999

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Risq was founded by Antony Turck and Jonathan Upton. Risq is solving a substantial innovation need that could improve estate administration for bereaved families, professionals, and society. COVID-19 has caused considerable challenges to the estate administration process, from reducing the number of probate applications to social distancing difficulties for executors, as well as an increase in deaths - executors' work has become more difficult. Risq's unique product will utilise machine learning to review and categorise transactions that pass through major UK financial institutions, looking for events that flag against defined risk rules. This product will reduce the reliance upon, and need for, paper records.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOREFRONT RF LTD	Sustainable and Inclusive Wireless	£209,691	£167,753

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The COVID-19 pandemic has seen many people transition to working from home, relying on home broadband connections. Whilst the UK's broadband infrastructure has proven effective for the many, rural communities have been affected by the strain placed on networks. Many remote villages do not have fixed-line access, instead using wireless broadband; the COVID-19 pandemic has resulted in congestion on these networks, hampering rural users now working from home. Additionally, limited broadband connectivity particularly affects rural areas in Wales, Scotland and Northern Ireland and contributes to regional economic inequality in the UK. The UK government recently announced £1Bn funding to expand cellular network coverage in rural areas, addressing the "digital divide" for rural communities. However, the benefit from this investment is limited by current radio frequency (RF) hardware technologies.

Forefront RF is a recently incorporated start-up company, founded to commercialise signal cancellation technologies developed at the University of Bristol. This technology has potential applications in cellular home routers for wireless broadband, and mobile network infrastructure. By replacing fixed frequency components with a "frequency agile" cancellation circuits, user equipment and infrastructure can be made "future proof" to the release of new spectrum. This extends the useful product lifespan of these systems, reducing replacement costs, reducing carbon emission from equipment manufacture, and reducing e-waste. This also supports UK regulatory policy with regards to spectrum licensing.

This project will undertake further research, to develop new circuit topologies to address commercially relevant features and performance, implement hardware prototypes, and assess manufacturing options, with the aim of demonstrating the viability of a commercial implementation.

By developing "future proof" RF hardware, device "upgrades" and network "roll-outs" would be done as software updates. This not only reduces cost and improves sustainability, but also ensures fair and inclusive wireless access for all parts of the country, as network upgrades would happen simultaneously across all geographies.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BOLT MARKETS LIMITED	GreenBolt: piloting a novel algorithm-based visualisation of investment risk for ESG assets to increase their liquidity post COVID-19	£174,935	£139,948

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

For many, sustainable (ESG) assets are still new and its hard to understand their risks and complexities. Thus, it comes to no surprise that the European Union puts transparency above all else in its ambitious EU Green Deal. Many other experts agree that this is the only way to sustainably increase liquidity for this asset class. However, this transparency with respect to rules and regulations is not enough.

At the point of sale, between the investor and the Independent Financial Advisor (IFAs) there is still ample confusion about the risks associated with sustainable assets. This leads to less investments in ESG assets depriving the sector of the much-needed liquidity and not letting it fulfil its positive potential for society.

GreenBolt will use digital technology and proprietary algorithms on the existing Bolt Markets platform for IFAs to visualise the risk associated with new sustainable investment assets in a transparent, regulatory-compliant and easy to understand way in order for IFAs to better advise their clients and to drive more liquidity into this asset class.

This project aims to accelerate ESG investments in the UK, help the government achieve its sustainability goals and provide better diversification and returns for investors.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DOMIN FLUID POWER LIMITED	SWIFT: Switch Inertance Fluid Technology	£217,920	£174,336
University of Bath		£74,957	£74,957

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

In this project Domin and University of Bath will develop and bench test (to TRL5) a Switch Inertance Hydraulic System using system knowledge developed at Bath for the previous decade, and Domin's highly innovative Additive-Manufacturing enabled direct drive servo valve design capability. The product will be capable of replacing the current throttling valves used in mobile hydraulic applications with a significantly (>60%) more efficient product. The global market for this product is \$7Bn, with potential cost of ownership reductions of 25% to end users and >140 MMT CO2 savings.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MEETWO EDUCATION LIMITED	An effective, data driven, interoperable, early intervention to tackle the covid related decline in youth mental health	£226,605	£174,486
THE ANNA FREUD CENTRE		£89,800	£89,800

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Prior to the outbreak of COVID-19 youth mental health services globally were already overstretched and unfunded (WHO\ 2018). Mental illness in young people costs the public purse up to £63,878 per person, pa (Suhrcke\ 2008). During COVID-19 the need for support has increased, whilst access to support has declined (Young\\_Minds\ 2020). There is already evidence of increased childhood depression during lockdown ([Bignardi\ 2020][0]\\_[Cortina\ 2020][1]). Since March 20th, engagement on MeeTwo has increased by 30% and high risk posts have increased by 65%. COVID has created multiple co-occurring risk factors that increase the likelihood of mental health difficulties (e.g., parental job loss, marital conflict, bereavement). The aggregation of this risk will only unfold over time so early intervention is crucial [(Wade, 2020)][2]. Early intervention helps prevent young people reaching crisis point and decreases the likelihood of long-term mental ill health in adulthood (RCON 2017). Post COVID-19 it is critical that the UK exploit innovative methods of prevention, intervention and service delivery.

MeeTwo is a multi-award winning peer support app for people aged 11-25\ . It already supports 35k young people and is featured on the NHS Apps Library. MeeTwo Connect is a new service, launched during lockdown, which enables young people to connect to their school, university or NHS mental health provider from within the app. MeeTwo and MeeTwo Connect are innovative because they provide anytime, anywhere access to multiple interoperable psychological support options.

Launched in 2017, the MeeTwo data set is now big enough to provide longitudinal insights into the impact of the pandemic. We urgently need to develop a suite of data reporting tools and undertake independent impact evaluation so that we can fully exploit the value of our data. The integration of Machine Learning and advanced data analytics techniques will improve understanding of youth mental health following COVID-19 and increase our capacity to help users access appropriate services.

This project directly addresses the mental health issues arising from COVID-19\ . With a better understanding of our data we can identify how COVID-19 has damaged youth mental health and deliver targeted support by issue, location, gender and age. Early intervention for the 37% of young people referred to CAMHS but discharged following assessment would slash CAMHS waiting lists. In 2017/18, 69% of young people referred to CAMHS did not receive treatment within a year (Children's Commissioner 2018). The provision of easily accessible, high quality, evidence based mental help for all young people will reduce the burden on school and university counsellors, CAMHS and IAPT; freeing up counsellors and clinicians to focus on those with greatest need. Data reporting tools developed with this research will make it easier to share data with institutions to inform and improve their services.

This 9-month Experimental/Industrial Research project, run in partnership with The Anna Freud Centre and Oxleas NHS Foundation Trust will ensure that MeeTwo Connect is fully equipped to play a leading role in the post COVID-19 recovery.

[0]: <https://osf.io/v7f3q/>

[1]: [https://www.ucl.ac.uk/evidence-based-practice-unit/sites/evidence-based-practice-unit/files/coronavirus\\_emerging\\_evidence\\_issue\\_2.pdf](https://www.ucl.ac.uk/evidence-based-practice-unit/sites/evidence-based-practice-unit/files/coronavirus_emerging_evidence_issue_2.pdf)

[2]: [https://ucl-new-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=TN\\_elsevier\\_sdoi\\_10\\_1016\\_j\\_psychres\\_2020\\_113143&context=PC&vid=UCL\\_VU2&lang=en\\_US&search\\_scope=CSCOP\\_UCL&adaptor=primo\\_central\\_multiple\\_fe&tab=local&query=any,contains,mental%20health%20youth%20covid&offset=0](https://ucl-new-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=TN_elsevier_sdoi_10_1016_j_psychres_2020_113143&context=PC&vid=UCL_VU2&lang=en_US&search_scope=CSCOP_UCL&adaptor=primo_central_multiple_fe&tab=local&query=any,contains,mental%20health%20youth%20covid&offset=0)

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GA DRILLING LIMITED	Plasma drilling technology for geothermal energy utilisation supporting decarbonisation of UK energy sector	£153,681	£122,945
ADVANCED ANALYSIS LIMITED		£49,722	£39,778
MTECH-UK ASSOCIATES LTD		£111,332	£89,066
University of Brighton		£102,864	£102,864

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

\* Geothermal energy is the only baseload (24/7) renewable energy source which is scalable effectively to replace present-day fossil fuel installed capacity. Geothermal energy although available in abundance below our feet everywhere is rarely considered commercially viable due to the subsurface challenges related to high drilling costs.

\* Successful geothermal projects rely on accessing cost effectively the correct geothermal gradient which varies significantly on the geology between 15°C to more than 100°C per km drilled. To meet the requirements to produce significant and sustainable power requires drilling to depth where optimum temperature are between 240°C - 300°C. The UK is considered not viable for geothermal with only a few small scale projects being developed due to the lower geothermal gradients (20 -- 30 °C/km).

\* GA DRILLING have developed plasma drilling technology for faster and more cost-effective drilling through hard rock as an enabling technology for ultra-deep geothermal power. The plasma technologies used have included electric arc and chemically assisted creation of pulses. Recent theoretical studies have focused on combustion and the objective of this project is to develop a combustion system that will meet the requirements for plasma drilling of hard rock.

\* The proposed project will contribute to the development of PLASMABIT by theoretical studies of combustion at high pressures at University of Brighton with experimental studies performed by MTECH-UK ASSOCIATES LTD in a combustion bomb designed by ADVANCED ANALYSIS LIMITED. GA DRILLING LIMITED will ensure that the combustion system design is compatible with down hole tool requirements and the heat produced from combustion meets the requirements for PLASMABIT drilling.

\* The target by the end of the project is to have sufficient simulation and experimental data to specify the combustion system for a full-scale drilling tool and for GAD to have incorporated this combustion system into the full-scale design.

\* Commercial exploitation of the project results for each partner is as follows:

1. GA DRILLING - Ongoing development of the commercial drilling system. Manufacture and sub-assembly of the drilling tool from 2025 with MTECH-UK ASSOCIATES LTD as a supplier for combustion system sub-assemblies
2. MTECH-UK ASSOCIATES - Further involvement with GA DRILLING to develop commercial systems. Manufacture and testing of combustion sub-assemblies for commercial drilling systems from 2025. Leveraging the motorsports supply base in UK for precision machining / ALM of advanced materials.
3. University of Brighton - Extended capabilities in high pressure combustion modelling. Further involvement with GA DRILLING to develop commercial systems.
4. ADVANCED ANALYSIS LIMITED - Further involvement with GA DRILLING to develop commercial systems.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CHARACTER COUNTS LTD	EasyPeasy Parenting - launching a SaaS social enterprise model to narrow the gap in Early Child Development	£218,380	£174,704

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

EasyPeasy is a proven child development platform that offers parents activities and guidance to turn everyday parenting stresses into opportunities for playful learning. The coronavirus pandemic caused a period of exponential growth on our platform as over 15,000 UK parents sought out our app to help with home-schooling their children, and traditional early years providers reached out to us for support in making the transition to digital and blended learning. With the support of the Innovate UK 'Business led response' fund (Apr-Jun), we were able to provide free access for all parents to the platform during this time, and work with brand partners to generate bespoke content for families (incl Scouts, National Childbirth Trust, LEGO).

We know that the impact of COVID-19 has been to increase inequalities in society. There is a need for ongoing support for families who may not have the skills or access to resources, to help give their young children the developmental play that will benefit them in the early years. Whilst providing free access to our platform allowed us to respond to need and mitigate growing inequalities, we must also consider our sustainability and growth as a business.

A niche market for early child development and parenting apps, within which EasyPeasy has had a first mover advantage, is enjoying a significant uptake in interest and investment globally as a result of COVID-19. As capital flows into the digital home learning space, we want to ensure that we can continue to play a lead role in meeting demand, whilst ensuring access and support to those the market does not automatically serve. Our vision is to combine purpose and profit, supporting a fair recovery from COVID-19 for all children, whilst building on the UK's position as a market leader in edtech within our early years home learning space.

In this project, we will implement a sustainability strategy to bring the app to a new audience of affluent families with propensity to pay a monthly subscription, who will in turn subsidise ongoing free access to disadvantaged families through our 'Plus One' model.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MOOG CONTROLS LIMITED	High Temperature Electric Motor Project	£187,654	£150,123
CARTER MANUFACTURING LIMITED		£138,821	£111,057
COIL TECH UK LTD		£22,741	£18,193
University of Nottingham		£149,500	£149,500

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Electrical machines such as electric motors currently have limitations caused by the failure of critical components at elevated temperatures. Research at the University of Nottingham has focused on developing a deep understanding of the primary cause of this limitation - the degradation of the insulation surrounding the copper coil within the motor. This insulation is there to protect the numerous windings that constitute the active part of the motor from touching each other and causing partial discharge and short circuits. As the insulation degrades, the functionality of the insulation is compromised and the motor eventually fails.

This project aims to take the results from the work done at Nottingham and use this to improve the temperature capability of electrical machines produced by Moog. Improving this capability will mean that motors will be able to operate in areas that they currently cannot due to the high temperature surrounding it. If the insulation and the motor is able to operate in a higher temperature environment, the need to cool it is removed. Consequently, in the case of aircraft, where weight is king, heavy and expensive cooling systems that are currently required to cool the motors will no longer be needed, saving weight on the aircraft and therefore, achieving reductions in emissions as the same propulsive energy is pulling less weight.

The benefits derived from this project will drive the business case for locating new investment in this technology by Moog to commercially produce products based on this technology in the UK.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADVANCED CONSTRUCTION TECHNOLOGIES LIMITED	TUPROOFS - The roof that pays for itself (TF)	£95,659	£76,527
BIPV LIMITED		£71,328	£57,062
HADLEY INDUSTRIES HOLDINGS LIMITED		£59,403	£47,522
MIDLANDS HIGH GROWTH LIMITED		£83,764	£67,011
NCC OPERATIONS LIMITED		£149,960	£149,960
WEST ROGERS LIMITED		£39,848	£31,878

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

**\*\*TUPROOFS\*\*** will create an energy generating highly insulating and easy to install, quality controlled, factory made roof that generates enough renewable (zero carbon) energy to power the home and export excess electricity while preventing energy loss upwards through the roof.

TUPROOFS is a key breakthrough product enabling an active solar roof where energy yield repays the capital costs plus dividend, attractive to owner/occupiers/private and social landlords, driving widespread employment and COVID-19 recovery. It also conforms to the Construction Innovation Hub platform and will be compatible with other elements being developed in the technical area.

We expect TUPROOFS roofs will become one of the elements of the Midland High Growth \[MHG\] initiative being promoted by the West Midlands Combined Authorities, a group of local authorities with the aim of applying deep retrofit to dwellings across their area. It will help to eliminate fuel poverty while making homes more comfortable and driving energy use down to energy neutrality and zero carbon.

ACTL and the project partners are proud to be associated with the MHG initiative where senior executives from several large local companies and charities are being seconded to the initiative to improve life and living standards across the Midlands and drive industrial recovery from COVID-19 in a socially inclusive and green way.

We are excited that by delivering deep retrofit initially in the Midlands where we can help demonstrate the benefits. We believe the systems will be diffused across the UK and ultimately deliver deep retrofit to the 25 million homes in the UK that currently buy approximately £34 Billion worth of energy when their net energy purchase could be around zero. If widely adopted the number of people employed by deep retrofit will be in the 100s of thousands and help the UK emerge from the COVID-19 crisis. At the same time we'll prepare the ground work for new off-site manufacturing in new factories with new rapid on-site deep retrofit construction technologies bringing new employment into areas where there was already high unemployment even before the pandemic.

The project will develop and install two prototype TUPROOFS roofs during the 9 months of the project to demonstrate their efficiency and efficacy and work with partners Hadley Group, NCC, MHG, BIPVco and Go Monitor to prepare outline designs for the creation of large scale production as the project successfully demonstrates the benefits of the TUPROOFS roof.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
JAMES HUTTON LIMITED	Novel nanocellulosic composites as antivirals and antimicrobials for new PPE materials (NanocellPPE)	£111,139	£88,911
CELLUCOMP LIMITED		£147,829	£118,263
HALLEY STEVENSONS (DYERS & FINISHERS) LIMITED		£101,954	£81,563
The James Hutton Institute		£101,994	£101,994

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Due to emergent pandemic threats the global use of personal protection equipment (PPE) has hugely increased (in particular face masks). Most of this PPE is single use, contains plastics, is not easily recyclable and generally is disposed of via landfill or discarded into the environment. It is estimated that if each person in the UK uses a single disposable mask each day for a year this would result in 66, 000 tonnes of contaminated plastic waste (which would be a reservoir of infection) and have ten-fold more of a climate change impact than reusable masks. Interestingly, most of these materials are prone to "wetting out" and are poorly absorbant which raises transmission risks, and moreover they lack the requisite antiviral/antibacterial activities required for robust protection. There are however very few antiviral PPE technologies readily available in the public domain and those that are suffer from complex manufacturing methods, high expense, poor reusability, poor washability and rapidly lose their antiviral activities. There is now a pressing need to develop completely new PPE materials which confer safety and comfort by being highly absorbant, breathable and can actively sequester viruses and kill them and have potent antimicrobial activity. It is also crucial that these PPE materials are made from existing waste streams, be multiuse, re-washable, compostible, recyclable and cheap; reducing the huge environmental burden and supporting the emergent bioeconomy for new products. This project will produce novel PPE materials (in particular face masks) which satisfies all these criteria and address a major market and environmental weakness.

This project will produce unrivalled novel ISO validated multiuse, washable, environmentally friendly PPE materials which have potent antiviral activities, while also considering antibacterial properties since warm and moist PPE masks may support bacteria. This work builds on our existing publications and patent portfolios with industry partners and also helps drive our novel products to the face mask market and beyond, while also enabling us to identify interesting antiviral/antibacterial properties which will later be investigated to unpick new potential pathogen control mechanisms.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LIGNIA WOOD COMPANY LIMITED	Laserwood	£114,988	£91,990
Bangor University		£45,842	£45,842
Coventry University		£49,720	£49,720
MILLENNIUM LASERS LTD		£173,523	£138,818

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Timber is an important renewable and sustainable material. Resin modification is a preservative-free method of protecting wood, to improve exterior performance and resistance to weathering and decay. Good impregnation is essential for resin modification, and a laser incision system has been developed to increase uptake, and improve distribution of the reactive system in the wood and rate of drying post impregnation. This project will commercialise and demonstrate the effect of hole spacing on fluid distribution and drying rate, working with large numbers of planks to give results that best represent the natural variability of wood, and optimise the process for future implementation.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STORY VENTURES LIMITED	Neighbourhood - Building the Future of Urban Living	£199,739	£159,791
DE TRAFFORD ESTATES LIMITED		£0	£0

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

UK town centres are in crisis; there are around 50,000 fewer shops on our High Streets than 10 years ago due to a 20.1% decrease in visitor numbers (an average of 40 shops closing per town centre in England and Wales) (BBC,2020). These issues disproportionately affect poorer towns, with areas in the north-west (such as Blackpool) seeing closures at double the average rate (Guardian,2020). COVID-19 is expected to rapidly accelerate the closure of town centres, leading urban areas full of empty buildings and low footfall. Operators, agents, and landlords don't have the tools to service growing consumer needs for connected communities, with no vertically integrated solution with the necessary tools to connect and activate a network of spaces, people, and services.

Neighbourhood are developing a novel, scalable AI solution for urban regeneration. The platform will offer a mobile first 'place-as-a-service' subscription, forming small neighbourhoods of locally-connected properties and on demand services. Tenants can search for properties, arrange viewings, take virtual tours, fill in forms, submit references and pay deposits via a mobile app., as well as communicate through community message boards, local events and classes (e.g. bring-and-shares, wellness classes, and community volunteering). Tenants will be rewarded for making environmental and socially impactful choices, such as low energy use, shopping at a local business, with a 'token' system to spend towards rent or other local services. Thanks to Neighbourhoods agile long term/short term lease backend algorithm, they make the most out of the real estate market demand maximising its yield per property. The platform developed in this project will drive community interaction and sustainable choices to address the growing challenges of urban loneliness and sustainable regeneration.

This project will lead to development of a pre-commercial prototype of Neighbourhood's 'Neighbourhood Operating System': a vertically integrated platform to manage, market and activate space, communities, and commerce. This platform will be validated through a 3 month trial with a large mixed use landlord.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MY NEXT MATCH TRADING LIMITED	MyNextMatch: Building a scalable API to help sports federations manage athletes' safety	£194,632	£155,706

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In the sports industry, most of the athletes' health records are paper-based. This paper-based information, which is in the form of a passport is owned by the athlete where the information is often inaccurate and can be easily tampered with.

Fraud is on the rise, suspended athletes can move from one competition to another by easy tampering of the data in their medical passports. There is no reliable system to cross-check and validate the information among stakeholders. This represents a significant trust problem in the upkeep of the medical records of the athletes, consequently a lack of trust in the industry itself.

The industry needs to improve the traceability and visibility of athletes' health records. Through this 9-month industrial research project, the project team will research for a process to develop a Proof of Concept for an API to allow their MediCard digital health passport be applicable to any sport.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STARLING CYCLES LIMITED	Novel High Performance Repairable and Recyclable Carbon Composite Ebike Frame for UK Manufacture	£50,944	£40,755
COMPOSITE BRAIDING LIMITED		£28,607	£22,886
NCC OPERATIONS LIMITED		£33,791	£33,791

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The novel composite Ebike offers a sustainable and lightweight Ebike frame development using thermoplastic materials. Starling Cycles, a Bristol based bike manufacturer, Composite Braiding Limited, a Derby based braiding specialist and the National Composites Centre, a Bristol based High Value Manufacturing Catapult Centre specialising in composite materials and processing R&D, joined forces to develop an innovative and sustainable answer to existing steel and composite bicycle frames. Existing composite bikes are not easily repairable or recyclable, and manufacturing processes are unsuitable for a high-wage economy, like which exists in the UK. The proposed processes, braiding and tailored fibre placement, shall ensure high performance through automated and reliable manufacturing processes. Those processes are also well-known for their high production rate, reliability and low waste, thus enabling local production. In addition, the range of an Ebike is, in part, determined by the weight the motors need to power during travel. Thus, lightweighting the structure helps to increase the maximum distance the bike can travel before recharging is required.

The project will produce a cost model, life cycle assessment report and fully assembled and tested e-bike demonstrator in their first step towards commercialisation. The positive impact on the UK economy shall include the re-shoring of bike manufacture and creation of up to 100 jobs within the supply chain. Also, the technologies could be used in many other areas of sports and leisure, but also transportation or construction.

It is hoped that this novel ebike will help contribute toward a more sustainable future for the UK, with increased uptake in cycling through a more accessible means of private transport - leading to a reduction in traffic and thus air pollution. This will improve the UK public's quality of life, fitness and wellbeing.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EKA SOLUTIONS LTD	RiskAnalysis.AI	£220,891	£174,504

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Technology can be a great enabler for governing organisations while effectively managing their risk, compliance, resilience, privacy and security posture. There are platforms and solutions that exist for this purpose and are collectively called Enterprise Governance, Risk and Compliance solutions (eGRC) or Integrated Risk Management solutions. The technology and data models that underpin most of these solutions are out of date and were built to handle only a handful of simple relationships -- such as a few risks and controls that were involved. As our understanding of the risk landscape improved and the data sources started increasing in size, nature and complexity, these solutions are struggling to keep up, making effective risk management and decision making difficult. The increased regulatory scrutiny and improved focus on risk in the post-COVID-19 world, makes it even more important to have a holistic view of your risk and compliance data.

We are proposing a ground-up refactoring of eGRC platforms based on the concept of Enterprise Knowledge Graphs. We will use graph database and technologies to specifically address the challenges brought in by today's hyperconnected datasets. We will create a reference architecture, which can be leveraged to build solutions on this platform, to address specific problems in one or more of the following areas,

1. Risk Management
2. Issue/Incident Management
3. Regulatory Compliance Management
4. Data Privacy Management
5. Change Management

Graph database is an emerging technology, which is designed to store data relationships as first class citizens. This can be leveraged to create knowledge graphs, which can then be used for machine learning and Artificial Intelligence. In November 2019, Gartner predicted that graph technologies will grow by 100% year on year for the next few years. However, in the post-pandemic world, this would be much higher as graph technologies have suddenly been thrust to the forefront and are used to deal with everything from COVID-19 clinical trials to modelling the effects of the pandemic in various industries and market segments.

The key outcome of the project is a Minimum Viable Product (MVP) which can be used as a capability demonstrator, in order to secure early stage clients and/or further investment for the continued development of the product.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INDIGO & LIMITED	Optimising supplier management to unlock clean growth, SME innovation & social impact	£212,634	£170,107

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The focus of this project is optimising supplier management to unlock clean growth, innovation and social impact. This project is focused on the Construction and Infrastructure sector, making it easier for clients to work with local SMEs and deliver to Net Zero Goals.

This project is supported by Network Rail and Faithful + Gould as project sponsors. The project will develop and pilot:

a/ Integration of carbon & social value metrics into the core IAND platform, making it easy for teams to have a holistic view of performance and the Carbon savings they have delivered.

b/ New ways for teams to find suppliers from their ecosystem -- with enhanced search functionality and supplier profiles to showcase the value they have, and can deliver on carbon & social impact.

c/ A new Collaborative Insights Platform, giving transparency on key social impact, and SME metrics for individual programmes or frameworks in real-time. Helping client organisations drive change, unlock innovation, deliver and report on carbon targets through SME suppliers.

This project will be piloted on a live framework enabling real-world testing and engagement with hundreds of suppliers during the project, enabling the capture and evidence of value at scale.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ELUCEDA LIMITED	Electronic Fingerprinting for the detection of counterfeits.	£218,669	£174,935

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project aims to develop a novel testing solution that allows the complete forensic fingerprinting of a range of aqueous consumer products (including pharmaceuticals and scotch whiskies) to reduce the number of counterfeit products that are able to be sold on the black market.

This technology is based on novel state-of-the-art detection techniques developed by Elucedá Limited and utilising an electronic testing system to achieve a comprehensive analysis of specific legitimate products in an effort to support brand owners and government agencies in finding and removing these from sale.

The innovative solution, consisting of disposable electrodes and reader, will be an automated test for simple, low-cost, portable and rapid evaluation of products at the source of suspicion in a standardised format. Requiring minimal technical training, the technology will be able to be used by a range of user groups and will initially be targeted at certain pharmaceuticals, scotch whiskies and cognacs, with rapid expansion to other pharmaceuticals and alcoholic spirits. This will be aided by the development of a bespoke, secure and segregated database which allows low levels of latency and rapid statistical analysis of previously testing samples to ensure the assessment represents an efficient use of time.

The solution will be aimed at (expected market entry 2023 following scale-up and test marketing) at alcohol brand owners/pharmaceutical companies, government agencies and re-selling companies, most interested in abating the supply of fake goods. Globally, the counterfeit trade accounts for 3.3% of global trade (OECD, 2019 report) with a value of £400 billion globally (Fact UK, 2019), which has been estimated to increase by up to 20% per year for pharmaceuticals, showing no signs of slowing. By enabling users to detect counterfeit products easily and quickly at source, end-users will be able to comprehensively remove these products from circulation, limiting the opportunity for criminal organisations to continue their operations. This will not only offer a significant financial benefit (EU government alone, lost £2Bn in tax revenues from counterfeit alcohol) but also protect the consumer from the potentially drastic impact of illicit goods (serious health implications, even leading to death, see Ksalol counterfeit pharmaceuticals in Ireland, 2020).

Elucedá Limited aims to revolutionise the portable counterfeit detection market, a completely new market which is growing rapidly due to the increases in counterfeit goods, particularly due to the impact of the COVID-19 pandemic. Elucedá will seek to exploit the solution across multiple end use applications where the rapid and on-site detection of fake goods is a key priority in terms of economic protection, environmental sustainability and the health and safety of the consumer.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CALDERA HEAT BATTERIES LIMITED	Experimental Development of a Zero Carbon Boiler to a stage where it can be deployed in real homes with beta customers	£215,757	£172,606

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Caldera is a heat storage company looking to decarbonise the economy by solving grid scale problems. The UK government is looking to tackle the economic impact of Covid-19 by 'building back better' a green economy that will deliver directly on the government's Clean Growth Strategy and net zero carbon ambition.

Caldera has developed a Zero Carbon Boiler which takes renewable electricity from the grid and converts it into heat which is stored within the unit until the consumer wants heating or hot water. The Warmstone technology will increase the amount of renewable energy that can be productively used, which in turn keeps down the cost of renewable energy. To bring this technology a step closer to reality, the unit needs to be developed to a point where it is safe to deploy and test in a domestic home.

The Zero Carbon Boiler has an innovative core inside that is trademarked as "Warmstone" Technology. The Warmstone technology is a low cost storage media that is able to absorb renewable electricity and store the equivalent energy for a 4 bedroom home to cover a 24 hour period on the coldest winter day or seven days of hot water in the summer. The energy is retained with 5-10% losses per day with an efficient insulation strategy.

The Zero Carbon Boiler is cylindrical in shape, weighs 1.5 tonnes and is 1m in diameter by 1.6m tall. The unit will be located externally to the property or in a garage or plant room. The existing boiler is removed and replaced with a Heat Interface Unit. Heat Interface Units are mass produced as they are used in district heating networks to transfer heat from the network to individual homes. The use of a standard Heat Interface Unit means that this technology is a straight forward retrofit and can be carried out by a plumber without additional training or modification to the property. The Heat Interface Unit is connected to the Zero Carbon Boiler via two insulated pipes. The Zero Carbon Boiler is also connected to the main electricity supply to the home.

To date a half size unit has been built and tested in Caldera's production facility in Fareham, with a full size unit in manufacture ready for deployment to a test house in September this year (2020). When the new unit has been installed and is functioning in the test house it will be at Technology Readiness Level 5 (September 2020).

This project will develop the Technology Readiness Level 5 unit to a Technology Readiness Level 6 status so that it can be safely fitted in real homes in summer 2021 for trials over the following winter. The project will include the manufacture of two units with one being used for certification testing and the other installed for trials at the Caldera facility in Fareham.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SYLATECH LIMITED	Demonstrating microwave assisted pyrolysis for green recovery of plastics	£218,674	£174,939
ENVA ENGLAND LIMITED		£9,485	£7,588

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Plastic is an incredibly useful material. This has been emphasised during the Covid-19 crisis, which has seen a dramatic surge in plastic use. This ranges from PPE equipment such as face masks and acrylic screens at supermarket checkouts, to single use plastic bags in home shopping deliveries. This came at a time where climate change and the need to protect our environment from plastic contamination were forefront in the minds of the public, businesses and government. Unfortunately, much of this waste cannot be recycled using existing technologies.

This project will trial a new enhanced recycling technology called microwave assisted pyrolysis, or MAP. MAP uses microwaves to heat up plastic waste until the point where it breaks back down into the oil from which it was first formed. This oil can then be refined and made into brand new, high quality plastics. Because MAP breaks the plastic back down into oil, MAP can even be used on dirty degraded plastics, removing the impurities and making it suitable for new food packaging. This is something which we simply cannot do at the scale we need to using traditional recycling methods.

Microwaves are great for doing this because, unlike other technologies that heat plastic from the outside in, it heats all of the plastic at the same time. This makes the process much faster, and helps the material heat evenly rather than getting too hot in places which can produce char. Even better, it doesn't matter if the plastic is wet or has left over food on it - this actually helps the microwaves do their work. This means we get a better quality product out, and more of it, and that means that we can produce more new plastic from it and save more carbon in the process.

MAP has been developed by an engineering company in North Yorkshire called Sylatech. They have already built a MAP machine that can process about 18kg of plastic waste per hour. That's the weight of around 1800 plastic water bottles! Together with Enva, one of the companies that sorts and recycles the UK's waste; Lucite, the world's biggest producer of acrylic (used in those plastic screens at the supermarket checkout) who wish to develop a circular economy for acrylic, and supported by experts in microwave pyrolysis and plastics chemistry from the University of Nottingham we will test this technology on real plastic waste to assess its ability to solve the plastics problem. The results from this work will enable us to determine, what plastics MAP can recycle, the recipe for doing that as efficiently as possible, how much carbon it saves compared to sending those plastics to landfill or incineration, and what it costs to run. Ultimately that will mean that we can develop this technology faster, turn the tide on plastic, and help with a green recovery of the UK economy!

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GRAYSON AUTOMOTIVE SERVICES LIMITED	New Product Development & UK Test Capability	£343,502	£175,186

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Grayson Thermal Systems are developing the very latest Vehicle Thermal Management Systems for industrial on / off highway vehicles. The vehicle thermal management system will be developed to meet the market requirements from specialist mining and refuse vehicles through to large Double Decker buses and rail applications.

By harvesting waste heat from the vehicle driveline components, we will be using this to pre charge the coolant / air mediums directly into the vehicle HVAC system, allowing our heat pump technology to offer advanced heating in colder ambient temperatures, in the most efficient way. This means that more of the stored energy can be used to power the vehicle traction system, rather than mileage range being reduced to heat passengers and drivers of the vehicles.

Our fully integrated VTMS will mean vehicle integrators can combine equipment and people temperature conditioning in one single unit, reducing system size, weight and fully installed cost. The efficiency of the system will increase vehicle range, due to the efficiency of combining two systems and utilising waste heat currently omitted to the environment.

The project combines several cooperative partners in the UK, and will result in UK manufacture of systems at our Birmingham facility, whilst supporting the development of electric buses by UK vehicle manufacturers. It will develop technology and no how, create jobs in UK manufacturing and deliver environmental benefits, with a reduction of CO2 as electric replaces diesel vehicles.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOCAL SUN LTD	HH-Gen: High performance green hydrogen generation from solar energy	£218,750	£175,000
Cranfield University		£92,403	£92,403

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In 2018, the IPCC concluded that limiting global warming to 2°C requires a reduction in CO<sub>2</sub> emissions of 25% by 2030 compared with 2010 levels, and to reach net zero by 2070. Hydrogen is a clean-energy solution representing an important aspect of the transition to renewable energies required to prevent catastrophic climate change.

"Green" hydrogen produced from renewable sources can address critical energy challenges. It offers a route to decarbonise many sectors such as aviation, long-haul transport, chemicals manufacture, and iron and steel, where it is challenging to reduce emissions.

Hydrogen is a versatile fuel, both in terms of supply and use, which can store large quantities of energy for prolonged periods of time, and can transport energy over long distances. It can enable renewable energy resources to provide greater contribution, with potential to mitigate issues with variable output from renewables, such as solar photovoltaics (PV) and wind.

However, producing hydrogen from renewable energy resources is currently expensive, and >90% of global hydrogen production comes from fossil fuels (so-called "grey" hydrogen, mostly steam reforming of natural gas). Although the costs of producing hydrogen from renewable electricity are falling, significant advances are required in the state of the art so that green hydrogen becomes cost competitive with alternatives.

FocalSun's technology aims to solve issues with the cost of production of green hydrogen. We seek to achieve this by focusing on eliminating inefficiencies in the processes used to produce hydrogen from solar energy.

Consider a large array of solar panels connected to the grid, which is then connected to an electrolyser to generate hydrogen through electrolysis of water. There are several inefficiencies:

\* PV panels are around 18-20% efficient and typically static and do not track the sun (meaning efficiency is in reality less than 18-20%). FocalSun uses bi-axial concentrating solar optics in combination with high-efficiency multi-junction solar cells, which are ~45% efficient. In combination with thermal energy recovery, this can result in more than 80% of the incident solar energy being captured for use as part of a hydrogen production system.

\* Solar cells produce DC electricity, which is converted to AC, typically transmitted several miles, then converted back to DC to power the electrolyser. DC/AC and AC/DC conversion consumes around 5-10% of the produced energy. FocalSun is designed so that the electrolyser is co-located with the solar power system, enabling direct coupling of the electrical energy, eliminating these losses.

This project will address these inefficiencies to enable green hydrogen to become cost-competitive with grey hydrogen. Moreover, because the directly-coupled configuration requires a compact electrolyser, this enables us to develop high-pressure electrolysers, where the water used for electrolysis is compressed so that the hydrogen is directly produced at high pressure, thus eliminating the pumping losses to compress hydrogen for transmission. Pressurising water requires much less energy than pressuring hydrogen gas because the change in volume that occurs is far smaller. This represents a future R&D direction, and a pathway to further reducing the cost of green hydrogen.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CHARGIFI LIMITED	Chargifi Home Office - Enabling Secure Remote Working Through Wireless Charging	£218,706	£174,965

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Chargifi currently provides connected wireless phone charging to companies with large office complexes and hospitality businesses. Our products allow a charging point to be a hub by which someone connects to their space -- whether to verify identity and check into a room or a hot desk, to turn on a video conferencing system, connect to a secure VPN or intranet or to customise a space, for instance to make sure that a physical disability can be managed.

In response to COVID-19 and the rapid switch to working from home, Chargifi is adapting its technology to create the "Home Office" which will support our customers to add remote workers easily to their network, while creating a product for businesses to better facilitate connecting remote workers through data to understand better how to support their changing device.

Working from home, or remote locations, is expected to continue. The May 2020 "COVID-19 remote working survey" by Eskenzi PR reported that 91% of the UK population are willing to continue to work from home once the pandemic is over.

By extending Chargifi's connected wireless charging proposition to home users through this project, our customers will gain a clear understanding of where people are, as they use their phone to login to work.

Our wireless charging product will support:

- \* Remote/home working by users, tracking time "at work" by logging hours. Useful for employer-employee relationships, as well as for allowing reimbursement and reclaim of a fair share of workers costs.
- \* Further specific security requirements by allowing a connected wirelessly charging device (the phone) to act as a third-factor authentication.

The Home Office will produce a rich data set that can aid in:

- \* Providing employers with detailed information of how and when their staff are working from home. Over time, this will allow businesses to optimise their office space to suit their teams' needs.
- \* Provide the government with a dynamic database to show how where workers are spending their time allowing resources to be allocated to where people actually are (impacting plans for public transit, etc).
- \* Understanding and predicting people's locations during the day, potentially impacting electricity load usage and forecasting.
- \* By provisioning decision information that allows both public and private resources to be allocated more optimally, over time this should help the country achieve its goal of becoming carbon neutral by 2050\.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DEEP-ID LIMITED	Meeting the UK's e-Commerce Legal Commitments and Increasing Security of Home Working Whilst Ensuring Inclusion	£196,655	£157,324

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The project aims to ensure that the advantages of home working and ever-increasing reliance on e-commerce, realised even more so during lockdown, can be safely maintained during the new normal by providing more secure access to online systems.

There is a pressing need to improve online security for a number of reasons. We are becoming increasingly reliant on e-commerce due to the constraints of the COVID pandemic. Additionally, there is a legal obligation on the UK financial services industry to provide Strong Customer Authentication for all online payments over 30 euros and all account access. Finally, we know that cyber crime and fraud is on the increase and is a huge problem globally.

Add to this the fact that current biometric authentication measures are not as effective for some ethnic groups, the use of ocular biometrics as part of a mesh biometric authentication process could provide a robust solution.

Therefore, we have brought together a very capable team of world leading experts in the fields of ocular research, development and innovation, technology and development and digital identification and authentication.

Professor John Marshall is the Frost Professor of Ophthalmology and Deputy Director for Enterprise at the Institute of Ophthalmology in association with Moorfield's Eye Hospital, University College London. He is Emeritus Professor of Ophthalmology at Kings College London, Honorary Distinguished Professor University of Cardiff, Honorary Professor the City University and Honorary Professor Glasgow Caledonian University. His research over the past fifty years has ranged over a number of ocular problems. This work has resulted in over five hundred research papers and 44 book chapters and 7 books international journals. He has more than fifty patents and has held posts chairing the medical advisory boards of many international companies.

Greg Roach has over 25 years' experience in delivering technology innovation in demanding commercial and compliance environments and has held senior board positions in data, services, manufacturing, proptech, security, and Anti-Money Laundering organisations where he has deployed technology to transform and sometimes disrupt. He is committed to using technology and research to protect individual identity, privacy and civil liberties.

Andrew Churchill was lead author of the British Standard in Digital Identification and Authentication (PAS499), which underpins compliance to the new regulatory framework in the e-commerce market, and is on the International Standards Organisation's E-commerce working group in this capacity. He has over 20 years' experience as a consultant and researcher to government, industry, and academia, and currently advises both HM Government and the private sector on the requirements under the UK Economic Crime Action Plan.

To meet our aim, this highly capable team will explore the potential security and inclusivity advantages of using three ocular biometric means in conjunction with range of existing consumer devices.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FASTR PROPERTY LIMITED	Fastr: BIM enabled proptech supporting SME Residential Developers and their construction supply chain to grow.	£197,374	£157,899
CALTON DEVELOPMENT LIMITED		£94,838	£75,870
ELK DEVELOPMENTS LTD		£98,495	£78,796
MGM NEW HOMES LIMITED		£108,476	£86,781

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Fastr Property are building on Fastr Land's software success, by innovatively developing the Fastr platform for construction and supply chain management, enabling Fastr adoption by SME developers and expanding their supply chain, allowing them to collaboratively compete against large housebuilders, building low carbon, sustainable homes that tackle the UK's housing shortage.

The Fastr team, composed of property development veterans, start-up entrepreneurs and software developers will work collaboratively with SME partners MGM New Homes, ELK Developments, and Calton Developments.

With energy performance standards for new homes remaining static since 2015[Building,2019] large house builders have avoided advancing sustainability, instead focusing on volume and maximising margins through poor quality, 'Identikit' homes, in part due to incentives from the UK Government's Help to Buy scheme.

Market conditions for construction sector SMEs are tough, they're second most likely to fail due to insolvency [ONS, 2018], often due to extremely tight margins exacerbated by poor productivity due to inefficient, paper based solutions that are labour intensive and error prone. This is compounded by lenders becoming more risk averse with SMEs due to valuation uncertainty [JLL,2020].

With only 28% of construction companies currently having a digital strategy, an SME focused Construction and Supply Chain Management Software solution has the potential to significantly improve SME Developers productivity and margins, whilst reducing development risk.

Fastr enables SME Developers to use BIM for the design and construction of modular, energy efficient housing built to Passivhaus and Future Home Standards, providing low carbon, energy efficient homes with minimised maintenance costs that target eco-conscious buyers. Fastr's development will deliver an industry leading solution, with entry into the Construction and Supply Chain Management Software arena combined with BIM integration transforming Fastr Property's growth through increased UK and international adoption of Fastr.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GREAT BRITISH AQUATECH LIMITED	DE-RISKING RAS - Developing best practice for RAS bio-filters: regular 'maintenance' dosing vs. seed only dosing	£93,645	£74,916
Nova Q Ltd.		£72,671	£58,137
Scottish Association For Marine Science		£71,261	£57,009

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The Covid pandemic has shone a light on the need for shorter food supply chains. Currently 53% of food consumed in the UK is produced here, but we are a net importer of seafood. However, with marine fish stocks currently over fished, sustainable growth in UK seafood production as a key part of any Green Recovery will have to come from aquaculture.

Recirculating Aquaculture Systems (RAS) are an on-land, tank-based aquaculture system, where water is reused having been put through water remediation systems including bio-filters.

RAS are being developed as a potential solution to the issues posed by conventional aquaculture: environmental degradation, the risk of disease or parasites (sea-lice in Atlantic Salmon, for instance), and locations far from final markets leading to high transport costs and emissions.

With closed systems and controlled conditions, RAS can solve these problems and provide a more sustainable source of seafood for UK consumers.

However, to achieve this, RAS need to overcome key challenges. Foremost among these is the risk of Hydrogen Sulphide (H<sub>2</sub>S) - a potent toxin in RAS systems. The threat of toxin spikes and so the loss of expensive stock has limited the growth of RAS; conversely, a proven method for solving this problem would help the expansion of this sustainable alternative to conventional aquaculture.

The dominant current approach by RAS operators is to 'seed' a bio-filter with bacteria when they start a system, in the expectation that the bacteria that develop will help to control toxins produced in the system, such as ammonia or nitrite. This 'seed and step back' approach can lead to sub-optimal combinations of bacteria species developing, with subsequent spikes in toxins. For instance, when sulphate reducing bacteria (e.g. *Vibrio sp.*) are allowed to accumulate in the bio-filters of RAS, they will produce H<sub>2</sub>S.

This project aims to prove the validity of an innovative new approach - 'maintenance dosing'. We aim to prove that the addition of regular applications of specifically chosen bacteria to a RAS bio-filter provides the following key benefits:

- \* more predictable and controlled micro-biome when compared to only applying a starting application;
- \* prevents the proliferation of *Vibrio sp.*, therefore reducing the risk of H<sub>2</sub>S;
- \* prevents the presence of Geosmin and MIB (common contaminants in seafood, resulting in 'off-flavour' taste).

'Maintenance dosing' is not common practice in RAS facilities either in the UK or Worldwide. Proof that this innovative approach had the material benefits outlined above would help it become 'standard practice' in the industry, and so facilitate the expansion of sustainable RAS as an alternative to conventional aquaculture.

Great British Prawns (GBP) and Nova Q have pioneered this 'maintenance dosing' approach, with successful results achieved in GBP's commercial prawn farm. However, no publicly available, replicated trials have been conducted to provide the data to support these results. This project aims to fill that gap. Great British Aquatech (GBP's R&D subsidiary) and Nova Q have partnered with Scotland's premier independent marine science organisation - the Scottish

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Association for Marine Science (SAMS) - to conduct this project.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LUMINOUS SHOW TECHNOLOGY LIMITED	Development of environmentally sustainable 'CO2 Jet' effect for live performance	£215,795	£172,636

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Operating within the entertainment industry, Luminous Show Technology is an innovative UK based electro-mechanical hardware development company. Having designed, manufactured and distributed hardware to some of the largest productions in the world as well as recently acting as designer and OEM to one of the largest hardware brands in our sector, Luminous are in a strong position to develop ground breaking technology and realise rapid distribution into the market place.

Following the closure of the events industry globally, Luminous Show Technology is looking to supercharge recovery into 2021 by bringing a new product line to the market.

Many live events across the world use large quantities of liquid CO<sub>2</sub> to provide visual effects on stage. This existing technology is essentially little more than venting liquid CO<sub>2</sub> into the atmosphere for the enjoyment of the audience. In the UK alone, it is estimated that over 2500 tonnes of pure liquid CO<sub>2</sub> are used for entertainment purposes each year, with the sector growing rapidly.

To help the UK live event industry lead the world with sustainable events Luminous Show Technology plan to develop new technology that eliminates the need to consume this volume of CO<sub>2</sub> for this purpose through the development of a replacement product that uses alternative technologies.

Luminous Show Technology is well positioned to exploit existing national and international pre-existing relationships to drive the new product to market very quickly and facilitate the industry to reduce emissions, provide innovative technology to productions seeking to reduce their environmental impact and saving time and money for users of the equipment.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
THEATRE ROYAL BATH LIMITED(THE)	ALPHIE AT TEA	£216,429	£173,143

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

ALPHIE is a digital training and co-creation tool for the theatre sector that extends the traditional theatre training market in the UK. The tool will leverage The Egg Theatre's award winning production and training work in the sector to ensure the next generation of theatre makers have access to effective and engaging training linked to real career opportunities.

ALPHIE brings digital learning technology, like digital badging and AI bot technology, to the theatre industry for the first time via their native digital watering holes. Young people are connected through collaborative online productions with professional artist' critique that promotes critical thinking through fast feedback loops.

Built on our award winning expertise in co-creation and theatre training, our model is innovative as a first to market solution for online, engaging theatre training and performance. It allows us to customise our content for each client within and outside of formal education. Complementing or replacing drama and theatre teaching in schools and colleges, the tool can both redress young people's wellbeing through creative engagement whilst opening up pathways into higher education and the theatre industry.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ASTOR-BANNERMAN (MEDICAL) LIMITED	Next Generation Bathing	£174,481	£139,585

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The **Next Generation Bathing** (NGB) system combines a number of technologies to deliver a completely disruptive solution to cleaning a person in a care environment making the process safer in a Covid-19 world. The **main innovation** is integrating four processes already developed for applications in other sectors.

Washing care home residents and people who require care holds significant risk to both the individuals and the carer. **Covid-19** made an existing problem **dangerous** as currently assisted bathing involves close contact and the carer putting their hands into the dirty bath water that may contain faeces and urine to clean the patient. The likelihood of contamination of carer or patient during current bathing is high, **53%** of Covid-19 patients present a positive faecal PCR test<sup>[15,16]</sup> and 82% are still positive up to 11 days after their respiratory test is negative<sup>[16,17]</sup>.

This **challenge is urgent** as during the Covid-19 crisis to 12/6/20 there have been 19,394 resident deaths <sup>[4]</sup>, as the main risk group is the elderly, and 7% of care home staff testing positive <sup>[5]</sup>:

\\* We must improve the carers job because we have a deficit of 77,000 care workers <sup>[8]</sup> and 40% staff turnover

\\* Changes post-Brexit will deter the overseas workers the care industry currently relies upon

\\* Job satisfaction and safety is important to recruit UK workers

\\* The over 85 years population will grow by 30% from 1.64 million to 2.13 million by 2030 <sup>[1]</sup>.

The Next Generation Bathing system will remove or significantly reduce detergent from the cleaning process which will support the **environment, decarbonisation and the circular economy**. Detergent accounts for 27% of the 105,000tonnes Phosphorous/year discharged in UK<sup>[19]</sup>.

The project will be completed under the full control of Astor-Bannerman but augmenting our market leading 28 years of experience developing new products for assisted bathing. Astor-Bannerman brings the VOC, bath development, system integration and the route to market.

Astor-Bannerman already has **market reach as the market leader** in social services bathing (estimated 30% market share) and our subsidiary has between 45% and 20% market share in care homes in different European countries. Our secondary market is export and we already have distributors in the USA and Australia and we are engaged with UKTI for export.

This **design builds upon a trial Astor-Bannerman completed in 2019** which demonstrated effectiveness but a need to add more energy to agitate the dirt on the skin and also a need to remove the scum from the surface during bathing and will deliver a **demonstrator**.

Next Generation Bathing system supports the ambition for Astor-Bannerman to be the expert, leading company in assisted bathing. This grant enables a significant development in the technical knowledge of the company to respond to Covid and accelerate the long-term vision for Astor-Bannerman to be the

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

expert, leading company in assisted bathing.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AEROCARE AVIATION SERVICES LIMITED	Far UV for Continuous Disinfection of Indoor Spaces	£166,108	£132,886
GATWICK AIRPORT LIMITED		£104,689	£83,751
IFIELD SOFTWARE LIMITED		£110,360	£88,288

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Aerocare Aviation Services Ltd (AAS) have accessed new Far-UV Technology that will make a serious impact on mitigating the transmission of pathogens for almost EVERY facet of society. In the light of the financial losses being incurred, the number of businesses lost, the impact on society of complete lockdowns, the market for this type of technology will be vast, and its positive impact on society will be significant and immediate. The Excimer Wave Sterilray(TM) (EWS) which we intend to adapt significantly reduces pathogens (a bacterium, virus or other microorganism that can cause disease) in our living space. It is our goal to make inhabited spaces safer by improving the environment to which people are exposed indoors by using a specific variant of UV waves known as Far-UV.

UV waveforms are not new, as UV-C they have been used to sanitise for some years now. UV is capable of eliminating the world's most harmful bacteria, viruses, and spores. EWS photons rupture the sidewalls of bacteria and spores, keeping airborne pathogen concentrations below infectivity level - one fifth of a second is all it takes for Excimer Wave Sterilray(TM) photons to destroy harmful bacteria, viruses, and spores. With unmatched speed, convenience, effectiveness, and safety UV products are capable of changing the world of air and surface disinfection. But in addition our EWS Far-UV technology is unique in that it works without threat of damage to humans in the same space (both skin and eye safe) as demonstrated in medical testing.

Our current range of products is aimed at supporting the safe movement of people in the aerospace industry. But the lamps are capable of sanitising large spaces, with applicability to airport terminals and travel hubs, hospitals, control centres, clinics, clean rooms, operating theatres, laboratories, offices, theatres, warehouses, ships. Indeed, any large open spaces where people work or converge.

This Project will develop the system for use in large open spaces. We aim to develop the software and processes required to map spaces and ensure full and safe coverage of Far-UV output to ensure rapid, 24/7 non-chemical disinfection for large indoor spaces using Far-UV technologies. AAS will work with Derichebourg Engineering to combine Far-UV with modelling tools and skilled engineering consultancy, plus academics at Southampton and St Andrews Universities to model the precise output of the Far-UV lamps to populate the software models. The combination will then be applied in a real world scenario at GATWICK airport to provide a comprehensive solution to their staff search area to begin with, including actual lamps and ground sensors to assess the validity of the model vs real world results.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FLOX LIMITED	NetFLOX: remote poultry farming fit for a post-pandemic world	£214,345	£171,476
COLE AGRI-TRADING LTD		£91,854	£73,483
University of Chester		£81,502	£65,202

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project will develop NetFLOX -- an Artificial Intelligence (AI) system providing poultry farmers with 24/7 media feeds, decision-support data and real-time alerts to improve welfare and performance and reduce environmental impact.

NetFLOX is a remote farm management system with initial applications in the high-welfare UK broiler industry. The Covid-19 pandemic has greatly exacerbated an endemic labour shortage while underscoring the biosecurity risks of human/livestock interaction. Increased demand for chicken (which spiked further during lockdown) has necessitated farmers building nearer residential locations and vulnerable SSSI ecosystems such as peat-bogs -- particularly in key poultry-producing regions Devon and Shropshire.

In addition, with Brexit looming, the UK is opening itself up to cheaper, potentially chlorinated, low-welfare chicken from the USA. This is putting significant pressure on UK broiler farmers to 'race to the welfare bottom', or find a solution to compete -- all in the context of a post-pandemic world. To help the industry scale sustainably, and remain resilient to "unprecedented times", automation and evidence-led management are a must... and the time is now.

**\*\*NetFLOX represents the future of farming: remote, low-impact, high-welfare, and with greatly reduced risk of zoonosis.\*\***

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PYROPTIK INSTRUMENTS LIMITED	Blast Furnace Raceway Measurement and Optimisation	£66,260	£53,008
TATA STEEL UK LIMITED		£218,750	£175,000
University of Sheffield		£122,084	£122,084

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

This project aims to provide accurate in situ real time raceway adiabatic flame temperatures, coal addition rates from the lance at the tuyère and raceway depth measurements to allow blast furnace operators the ability to optimise their coal injection rates and oxygen enrichment levels at low utilisation levels to reduce coke usage.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GOOD.LOOP LTD	Connecting Local Business and Charity to Sustain Local Commerce	£124,011	£99,209

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Small local businesses are important. They're rooted in the landscape where they grow, and they give back vitality, economic sustenance, and create a positive local identity. They are also the seed-beds for innovation and growth: global companies start as local ones. And right now, they're dying.

Local shops and producers are losing out to big suppliers like Amazon. Their customers simply aren't coming by. Many shops can deliver, but when online, people don't think of them.

Advertising is a solution to this. But cost-effective advertising is hard. Small companies (who can't afford marketing professionals) often struggle with advertising. Producing an ad now, and one that is sensitive to the mood, is tough. Good-Loop takes plain adverts and adds purpose through charity links. E.g. your ad can raise money for covid-19 related charities. This provides a straightforward way to produce tactful and appropriate commercial messaging in this crisis.

Meanwhile, newspapers are seeing a surge in readers around coronavirus -- but a large drop in advertising revenue, as many advertisers avoid negative stories. Our approach could help solve that, and fund quality journalism on bad-topic news.

### Objectives

Make a self-serve portal that allows a small business to create purpose-led adverts, targeted for their local customers, and then manage the ad campaign.

Deploy this with small UK businesses, partnering with small-business networks.

End objectives: Achieve a boost in revenue for: local businesses, for bad-news (but high-quality) journalism, and of course, for Good-Loop too.

The project focuses on smart software tools to make video adverts.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PROSPECTIVE LABS LTD	Automated fleet dispatcher for real-time bus occupancy management	£212,776	£170,221

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

FlowOS is a Simulation/Machine Learning driven dispatcher for scheduled bus services. The FlowOS dispatcher enables bus operators to issue automated real-time instructions to drivers that are designed to regulate vehicle occupancy and maximise the use of a vehicle's capacity along a route. FlowOS sends automated instructions to the driver of each vehicle in a fleet, in response to live occupancy data, the current location of each vehicle and the forecast number of passengers wanting to board at each stop.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EAS TECHNOLOGIES LIMITED	Accredit-GO	£217,346	£173,877

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

EAS Technologies (t/a as Accredited Solutions) provides accreditation platforms to many of the world's largest sporting organisations, events, and facilities. Our proposal for the Accredited-GO project will allow us to offer an advanced set of tools that will allow the global sporting and events industry to get back to hosting sporting and live events in a safe, efficient, and sustainable manner plus provide a platform for major facilities to ensure their staff and contractors are safe to be in the workspace. The system, although initially born from our experience in major and live events and, will also have application for a broad range of facilities across multiple industry sectors. As well as addressing the initial need for business to return to the new normal to support the economy, the product will also address a long term strategy of collecting information around COVID-19 such as health passports, vaccinations certificates, and other relevant data to ensure a safe and secure environment for the future, as well as providing a solution should another such pandemic should occur.

The solution will feature a range of tools from the information collecting stage, to the social distancing number monitoring, to the access control of such areas including e-badging, as well as leading into the track and trace.

A secure innovative technology platform to collect and store sensitive data as well as providing an end to end solution and integration capabilities into existing hardware provides a sustainable solution.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BILLON GROUP LIMITED	Open Platform Providing Fraud-Resistant Covid-19 Immutability and Back-to-Work Certificates for All Companies	£215,195	£172,156
THE GEKKO GROUP LTD		£193,059	£154,447

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The goal of keeping the economy open despite Covid-19 urgently requires long-term solutions that help people prove that they have the necessary workplace safety training - especially in hospitals - and to prove their personal test results or that they possess immunity. Our solution is an open platform for the issuing and sharing of fraud-resistant certificates of proof; a solution which uses a distributed ledger (blockchain) technology that allows personal data to be hidden from everyone except the certificate issuer and the recipient. We imagine a world where people know that results of wide-scale testing programs allow us to trust people around us in public places, and where employees can feel safe again in places such as hospitals, airports, or nursing homes where staff cannot socially distance themselves easily.

The Fraud-Resistant Covid-19 Certificate Platform will consist of three elements:

- (1) A multi-tenant platform powered by our award-winning Distributed Ledger Technology (DLT) which serves as a back-end for credential storage and sharing, complete with clear APIs to capture medical test results,
- (2) a Credential Generation front-end system - to allow companies to rapidly deploy a mobile or desktop solution to issue training certificates to their own employees, and
- (3) a white-labelled mobile wallet for individuals to quickly show QR codes proving that they have an immutable and fraud-resistant certificate, and can access restricted places in seconds.

The prototype, due in August, demonstrates certification of medical staff after completing PPE (personal protection equipment) training and demonstrates the power of distributed ledger in protecting personal information. This project extends that prototype into a full build of the certificate sharing platform.

Last, it is critical that such a platform is open. Our vision is to make this platform available as a shared utility so that any solution provider or company can offer their own certification program and use the platform for data protection.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SPOT WORKS LTD	Project Perfect Apple - using AI and automated analytics to grant Supply Chain superpowers.	£117,073	£93,658
University College London		£48,468	£48,468

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Project 'Perfect Apples' will develop a single source of performance truth for industrial businesses to enable them to own supply chain and operational improvements.

By converting disparate multi-source data into a format that is ready for supercharged value creation, the product aims to disrupt several performance improvement industries. The result is rapidly connected data that will form the client's baseline upon which they can focus and measure the value of improvements.

In particular, Perfect Apples will play a key role in the initialisation of the supply chain through strategic sourcing. By removing the typical data bottlenecks of disparate data. Procurement executives and consultants will be steps ahead and get the **\*\*best deals faster\*\***. Closing the loop they will have the objective measurements in place to measure supplier performance and quality in the exact same way.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ALCHERA DATA TECHNOLOGIES LTD	Real-time data-driven insights to drive sustainable travel & bus network resilience post-Covid-19	£118,612	£94,890

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Buses running to schedule is a perennial problem faced by transport authorities. Major cities including Cambridge have struggled to gain insights into the root cause of bus delays, in order to better manage and operate wider transport services and encourage more sustainable use of public transport.

However, step changes to road usage due to Covid-19, including increased pavement sizes, new cycle routes and changing travel behaviours mean that public transport operation is set to become more challenging than ever.

While Covid-19 has temporarily reduced the occupancy of buses across the network, longer-term bus use remains a vital pillar in transport policy. Understanding how the bus network is performing can provide key insights into how it can be improved in an agile and responsive fashion, encouraging higher bus occupancy, and informing policy to getting more cars off the road.

One of the underlying impacts of Covid is that it provides a unique opportunity to understand network dynamics as all buses have been operating more smoothly due to lockdown and fewer vehicles on the road. However as the lockdown continues to lift and more vehicles, pedestrians and cyclists return to our roads, pinch points are already beginning to occur again.

In this project, Alchera will work closely with the Smart Cambridge programme; an initiative part of the Greater Cambridge Partnership (GCP) a body which includes, Cambridgeshire County Council, Cambridge City Council, South Cambridgeshire District Council and the University of Cambridge and was set up to deliver the Greater Cambridge City Deal.

Working closely together with Smart Cambridge, Alchera will develop a fully integrated tool to identify when buses are running out of sync with the expected timetables. These data insights will identify pinch-points in order to inform operational decision making & wider transport policy for the better running of bus services in Cambridgeshire, in turn encouraging the adoption of sustainable travel. This work will build on Alchera's capabilities providing software tools and machine learning via our Intelligent Data Hub, and provide integration to existing workplace tools such as Power BI used by Local Authorities across the UK, to enable them to make data-driven decisions.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INNVOTEK LTD	Development of a Pre-Commercial Demonstrator Inspection Robotic Platform Based on Innvotek's Vortex Vacuum Suction Technology	£218,599	£174,879

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The VORTEX proposal seeks to develop a vortex suction technology robot that will autonomously navigate the vertical surfaces of such structures while deploying a combination of non-destructive inspection techniques. Air suction through a nozzle of a specific geometry create a vortex and initiate a force that attaches the robot to a vertical surface while its wheels move it around. The VORTEX project will create a system that can rapidly and economically inspect any large vertical structures, Wind turbine and airplane wings, fuselage and other confine space, saving huge amounts currently spent during the manual periodic inspections.

The VORTEX platform will provide the industry with a portable flexible and multifunctional platform for surveying any assets with complex geometries in hazardous environment and will be able to survey non-magnetic structures including rough and uneven surfaces.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EARTH ROVER LIMITED	Selective Robotic Broccoli Harvesting Reducing the Requirement for Seasonal Manual Labour due to COVID 19	£252,754	£174,400
Manufacturing Technology Centre		£109,220	£109,220
POLLYBELL FARMS LIMITED		£86,851	£69,481
University of Lincoln		£0	£0

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

The Earth Rover led consortium will build a prototype selective that will contribute to solving the problem of a shortage of seasonal agricultural labour required to pick crops due to COVID-19 travel restrictions and Brexit.

The robots use an AI-powered vision system to select in-spec broccoli and leave crop growing so reducing crop waste.

A gang of three robots can select and cut up to 12 broccoli heads in 5 seconds. The cut heads are passed to a conveyor system mounted on a tractor and packed.

The project will place the UK at the forefront of agricultural robotics and offers the potential to create high-value jobs and valuable export opportunities.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FDB SYSTEMS LIMITED	FDB Systems: A revolutionary platform which generates structured and machine-readable data from raw corporate filings, saving up to 99% of time	£216,627	£173,302

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

FDB Systems Ltd. is a rapidly growing UK-based SME specialising in fintech. FDBSystems was founded by Simon Mahony (an Entrepreneur and Investment Analyst) and Bogdan Panait (a Software Engineer and Quantitative Trader). In the UK and Europe corporate filings are not standardised and are distributed in PDF format. As a result, investors, shareholders, regulators and law enforcement are unable to use cutting edge Natural Language Processing (NLP) techniques. FDBSystems will produce the first structured and machine-readable data from UK and European company filings enabling users, for the first time, to employ NLP tools in this area.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GEORGE WISCOMBE LIMITED	Fatima: a digital platform to transform qualitative reasearch in marginalised sectors	£202,728	£162,182

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Qualitative research will underpin effective commercial activities, NGO interventions and government policies to address the direct impacts of COVID-19, and more generally for the UK's wider socio-economic recovery.

However, whilst the elderly, socio-economically disadvantaged and less-integrated ethnic demographics are impacted most, COVID-19 has further increased the already unmet challenge of qualitative research within these marginalised and often vulnerable groups.

With the most effective face-to-face data gathering - including interviews, focus groups and field work - prevented by social distancing and travel restrictions, remotely undertaking qualitative research within these groups faces fundamental barriers to accessibility and scale due to:

- \* Poor access to broadband, computers and smartphones compatible with most connectivity platforms, and overall low rates of digital literacy
- \* Lack of technology to manage data gathering from respondents who can only be reached via landline or 'non-Smart' mobile feature phones, and integrating effective research workflows across multiple platforms
- \* Study design and agility to extract the complex and sensitive multi-dimensional sentiment data, given these respondents' specific scenarios -- many targets for researchers in these marginalised and vulnerable groups may also have compromised capacity to articulate direct responses for reasons of safeguarding or otherwise
- \* Scalability of costly manually-intensive analysis methodologies to clearly identify and correlate these dependencies across more complex topic models and other hidden qualitative data variables

Despite an increased need for actionable outputs, this work has therefore largely been suspended, both by commercially-active and vertically-integrated research organisations.

Existing digital toolsets for qualitative data gathering are consumer-focussed web/smartphone-based applications, which are predominantly designed to meet the needs of large-scale corporate market researchers. These commonly use automated speech-to-text transcription, but support only very low-level sentiment analysis for simple tightly-constrained research scenarios.

In response, Maido are developing Fatima, a digital platform for qualitative data collection and analysis, which uniquely connects the end-to-end research value chain for marginalised respondents who can only be accessed via feature phone conversations.

Maido have already completed a successful proof-of-concept development, realising the core data architecture and remote workflows for recorded data gathering. Leveraging their minimum-viable-product and proven transcription and natural language processing toolsets, Maido now seek to fully develop the qualitative features and programmatic functionality into a scaled full-platform prototype, with a high level of analytical automation.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MAS NETWORKS LTD	CareLineLive	£217,653	£174,122

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

In the next 30 years the number of over 75s in the UK will double. According to Age UK, more than 30% of elderly needing care will not get a bed in a care home. Global demand for home care is growing at between 3% and 8% annually. There are over 15,000 Domiciliary Care Agencies with c.550,000 carers employed in the UK.

CareLineLive, part of MAS Group, is an award-winning care management system for home care agencies and are members of United Kingdom Home Care Association. Our customers delivered 200,000 Hours of Care in June 2020\ . This project will extend CareLineLive's existing home care management system to explore the viability of capturing and recording more indicators of a service user's mental and physical health.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OXFORD SHAKESPEARE ENSEMBLE	Digital Theatre Transformation	£208,754	£167,003

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Following lockdown and Covid-19 closing down theatres across the country, Oxfordshire's Creation Theatre Company (Oxford Shakespeare Ensemble) have rapidly transferred their work online. Productions of The Tempest and The Time Machine using video conferencing platforms, green screen technology and innovative video design, sold out to a paid audiences and gained Creation considerable notoriety in a new emerging medium of digital theatre. This has further developed with collaboration with the games, filming and TV sectors and a major research project into how they have adapted funded by the AHRC. The next crucial stage in this digital transformation is to remove the restrictions, and often unfit for purpose nature of conferencing platforms and working with tech developers create a new platform to fully explore the brave new world this rapidly emerging medium has to offer. In a radical change to their organisations business plan and in response to Covid-19 it will involved longer term contracts, security and training for the performers involved as well as offering a 96% carbon emissions reduction in comparison to their previous work.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AIRHEAD DESIGN LTD	airHEAD - Inflatable Bicycle Helmet	£239,013	£174,479

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Air quality, carbon emissions, health, wellbeing, and road congestion are serious issues facing British society and active travel i.e. walking and cycling is a key DfT strategy to improve them all. The statutory Cycling and Walking Investment Strategy has already received £1.2bn and a further £1.2bn over 2 years is pledged for infrastructure and active travel projects with the ambition to double cycling for short journeys by 2025. Other initiatives for shared bicycle schemes e.g. "Boris bike" in London have proved popular in congested cities.

The COVID-19 pandemic has seen increased government financial support for cycling for commuting to promote as "green as possible" recovery; a 5% growth in cycling means 8m fewer car journeys, 9 million less rail journeys and 13 million less bus journeys. Cycling is open to anyone irrespective of gender, age, ethnicity, and a wide range of abilities. Although cycling has proven health benefits, cyclists are vulnerable when involved in accidents either by themselves or with other road users and even though cycle helmets are known to reduce serious head and facial trauma, helmet use in the UK is typically 60% and in other European countries can range from 15% to 50%. Where helmet wearing has been made compulsory, there is a notable reduction in cycle usage.

One reason commonly cited for not wearing helmets is carriage and storage between journeys particularly when commuting and clearly there's a need for a cycling safety helmet that can be folded and stored compactly between use. Our solution is airHEAD, a cycle helmet which is not only lightweight but when folded occupies a small volume, 1/10 the size of the full unit. We've manufactured a proof of concept prototype and testing at BSI shows that it meets or exceeds impact test standards to an exceptional level. The purpose of this project is to develop a production prototype prior to commercialisation. The helmet is offered in 4 sizes which are adjustable and designed to be inclusive for all members of the cycling community.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AEROPOWDER LIMITED	AEROPOWDER - Cleaning waste feathers to create circular products	£174,008	£139,206

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Food deliveries played a vital role during the COVID-19 pandemic, as they kept the nation fed and allowed us to remain socially distant and safe.

However, fresh food is temperature-sensitive and must remain chilled to avoid spoilage. Thermal packaging, which protects food from changes in temperature during transport, is therefore vital to our supply chain. Traditionally, expanded polystyrene (EPS) has been used as it is an effective insulator. But EPS is well known as an oil-based plastic that devastates the natural environment, remaining in landfills for centuries after use.

Following COVID-19 the demand for food deliveries/thermal packaging will increase. Gousto, a prominent meal kit delivery company, delivered five million meals in June compared to around half that amount in January. Generally, online grocery sales jumped 92% in the four weeks to 12 July, rising to 13% of the grocery market from just over 7% before COVID-19.

However, as we build back better we need to ensure that EPS is a material of the past.

Sustainable thermal packaging solutions are needed in the UK, and at AEROPOWDER, our mission is to enable the local production of sustainable materials anywhere in the world, wherever there are feathers.

In the UK alone, around 1000 tons of waste feathers are generated by the poultry industry every week, a significant waste disposal issue. The vast majority are converted to a low-grade animal feed, with low nutritional and low economic value. We think feathers can do so much more.

Our initial product is pluumo, the world's first feather based sustainable thermal packaging material made for food deliveries. Powered by feathers, pluumo matches the thermal performance of EPS and so allows food deliveries to be made more sustainably as it is produced from waste materials and is compostable after use.

pluumo launched in 2018 and is being used at an early adopter scale, but there is still some significant work to be done to ensure that it is available for the wider market. Waste feathers from the poultry industry are not currently cleaned; therefore for this project, AEROPOWDER will develop feather washing processes specific to pluumo's needs, unlocking the immense untapped potential of this waste resource.

Feather washing R&D will be carried out collaborating with poultry and feather washing experts. Detailed measurements of self-washed feathers will be carried out, as well as analyses of the thermal performance of prototype pluumo units. Crucially, this project will measure the environmental impact of any proposed processes to ensure that pluumo has a positive impact on food delivery services.

Once completed, AEROPOWDER will look towards setting up a UK based dedicated facility for the production of pluumo, including the feather washing system developed. Therefore, this project is vital for setting up jobs, creating an entirely new value chain out of waste feathers, and importantly securing the UK's sustainable thermal packaging supply chain.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRIVAEO CLOUD SERVICES LIMITED	Omnicient. A Reverse Logistics Solution	£205,455	£164,364

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Trivaeo Cloud Services Limited is a UK-SME specialising in Software and Reverse Logistics. Trivaeo was founded by David Claxton and Pat Graham who aim to provide a sustainable solution that will reduce the environmental impact of the high levels of returns. Trivaeo proposes a reverse logistics UK-wide eco-system for manufacturers/main retailers, resellers, logistics, and customers, which has the potential to halve pollution and double revenues achieved from returns. The logistics of returns is complex and has a significant environmental impact, with 10x more greenhouse gasses being spent on these operations than required and a high proportion of returned products ending up in landfills. COVID-19 has exacerbated the negative environmental impact of returns by driving the immediate need for even more online sales and has a had long-term impact by destroying bricks and mortar shops. Trivaeo will produce an online reverse logistics platform supported by mobile applications that recognises the required processes to return/resell any item purchased online. The Trivaeo solution is novel. The technology used is leading edge. Using the latest open banking regulations to speed refunds, "Blob" storage and big data analysis to track return requests and distribute pick-ups to local couriers and Artificial Intelligence to match Unique Product Codes (UPC's scanned onto a mobile app) to the items being returned and list for re-sale 10x faster than currently possible.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PROCESS VISION LTD	Using Robotics to Lower Maintenance Costs and Improve Safety	£218,128	£174,502

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Process Vision is taking the development of a snake robot to the next stage. The system will be able to perform some maintenance tasks, as well as inspection in vessels and pipework. It is hoped that this innovation will help improve safety, costs and reduce gas wastage.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WE LOVE SURVEYS LIMITED	A digitised drugs audit system that will save over 251,000 hours of employee time annually in UK hospitals	£184,714	£147,771

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Controlled Drugs are subject to detailed monitoring by the Department of Health in the UK. In the majority of acute, mental health and ambulatory settings, audits are carried out using paper. As a result, the process of completing an audit is slow, inefficient and open to dangerous error and misinterpretation.

We Love Surveys Limited (Lovesurveys) is a rapidly growing UK-based SME that specialises in clinical pharmacy. The company was founded by Helen Dargie and Janis Silins. Lovesurveys is solving an innovation need that could save over 200 hours of employee time annually per hospital in the UK. This is in the form of a completely digitised drugs audit system, removing the reliance on paper altogether.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LIGHTNING SOCIAL VENTURES LTD	Digital grant delivery to financially vulnerable users	£277,388	£174,754
DO IT SERVICES LTD		£184,352	£147,482

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

To address the economic impact caused by COVID-19, our project will enable financially vulnerable people and organisations to receive instant support from grant providers, recover from shocks and build financial resilience for the future. This will be done by providing an end-to-end solution for grant delivery from application to payout and post-payment insights, which will challenge existing norms and eliminate friction for institutions in the aid distribution sector. Our innovation offers several unique advantages in comparison to traditional grant administration and payout systems: speed, transparency, security and data-driven insights.

The project is a collaboration between two organisations:

- \* Lightning Social Ventures, a female-founded early stage mission-driven FinTech startup which will manage product development, testing and operations.
- \* Do IT, the UK's leading volunteering and social wellbeing platform, which will focus on go-to-market partnerships and impact evaluation with its strong institutional network

Our initial focus will be on facilitating the transfer of funds within the UK, from grant-providing institutions to financially vulnerable individuals or organisations who require support as a result of the economic situation. In the longer term, we plan to expand globally, including markets such as international development aid. Within the UK, our customers are the institutions providing the financial support necessary for the financially vulnerable people and organisations. These grant-giving institutions include charities, local authorities, industry associations and national government bodies. Our potential end-user beneficiaries fall within the c.23M financially vulnerable (low income, low saving) group of individuals and small business owners who may be in need of support. We have already developed strong relationships with multiple grant-providing institutions, which we plan to test and launch our solution with locally over the course of this project. Beyond this, the project also has vast potential for future international expansion given the global nature and scale of the challenge we plan to tackle.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EVANLEE LIMITED	OffsetBlocks	£432,500	£173,000

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

"Offsetblocks" is a project to build a blockchain (sometimes referred to as Distributed Ledger Technology (DLT)) solution for recording the value chain for carbon offsets. This is a novel and innovative use of blockchain technology to solve an industry problem.

A carbon offset is a way to compensate for your emissions by funding an equivalent carbon dioxide saving elsewhere.

There are two markets for offsets.

\\* Compliance market - where large industrial polluters are required by legislation to offset their emissions.

\\* Voluntary market -- individuals and companies buy credits that fund projects, such as planting forests, that can reduce the level of carbon dioxide in the atmosphere.

The global market for offsets is already very large and is growing rapidly.

However, the industry is unregulated, opaque, fragmented and inefficient. Offset projects set their own price, there are multiple project standards, poor monitoring, and often no lifetime view of project outcomes.

Some projects are verified by standard providers, but standards differ and are focused on environmental outcomes not financial probity. There are multiple project types and different standards applicable to different projects. There is no standardised approach to pricing of carbon credits and project pricing is opaque in any event. Calculated emission reductions often occur over time and sometimes these are not verified. So, it is not clear in some cases whether the emission outcomes are delivered or whether they are double-counted.

The result is a crisis of trust and legitimacy in an industry that is opaque and open to abuse.

Ultimately the lack of trust stems from opacity in the current system. The solution is to lift the curtain and make the entire process transparent. Blockchain makes data open, transparent and verifiable.

Blockchain is a decentralised immutable record-keeping technology that stores data in a verifiable and permanent way.

Blockchain simplifies the exchange and tracking of information and payments by creating a permanent digitised chain of transactions that is unalterable. Each participant in the chain can access the data and additions to the blockchain are shared in the network based on each participant's level of permission. It can be used to build trust and drive greater transparency and efficiency.

It can improve traceability, efficiency and fairness in a system.

The intention is to build a blockchain solution for recording transactions in the carbon offset industry. The planned concept is to build a blockchain protocol,

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

built specifically for the carbon offset industry, combining smart contracts for the producers, support for regulatory and marketplace stakeholders, and transparency for consumers. It is envisioned that the block chain protocol will provide a standard API, which a variety of services and applications can integrate into. The project team will develop the underlying blockchain protocol, online services for producers to submit their projects into the smart contracts, and a consumer focused app to view the individuals carbon offset transactions.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VECTOR PHOTONICS LIMITED	Lasers fOr Communications AppLications (LOCAL)	£217,848	£174,278
University of Glasgow		£61,909	£61,909

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The COVID-19 crisis has placed an unprecedented demand on communication networks. The OECD recommends that "Network operators should anticipate increased demand and prevent congestion by upgrading their interconnection capacity" (<http://www.oecd.org/coronavirus/policy-responses/keeping-the-internet-up-and-running-in-times-of-crisis-4017c4c9/>)

Datacentres require low latency, ultra-high capacity optical data connections. At present data centres are large scale and interconnected by long-haul fibre-optic connections. Within it a data centre has many short range (100-300m), low cost optical links, driven by low cost vertical cavity surface emitting lasers (VCSELs). The long-haul fibre connections (100's-1000's km) are driven by high cost and high-performance edge emitting lasers (EELs).

Future internet of things (IoT) and 5G cellular roll-out will result in sustained growth in the volume of data storage and the volume of data movement which will require changes in the data centre landscape. Initially, an increase in the size of datacentres, requiring longer link lengths is expected. Additionally, low latency and problems in situating centres in urban areas, we expect distributed datacentres, requiring a step up in link-lengths approaching those of current metro networks. This change in system architecture cannot be supported by the present low cost VCSEL technologies as low powers limit the link length to a few hundred metres. Current EEL technologies can offer the required performance but not at the required cost. Following on from the commoditisation of active optical cables for datacentres is another opportunity in future domestic data cables. 8K TV and high speed USB are fighting the limits of copper connectivity, and a switch to optical cabling is now on the horizon. Cost is the ultimate driver for domestic markets, and our establishment in data centre cabling should put us in an ideal position to pursue this large market in the future.

We have developed a new class of laser that due to its unique design allows performance that is better than that of both existing laser types; EELs and VCSELs. It comes with added wavelength agility (i.e. it can be applied to almost any emission wavelength) and has major cost advantage. The cost advantage from surface emission allows for; on-wafer testing, the packaging of only known good die, and the opportunity of on-wafer burn-in. A symmetric low divergence beam further reduces packaging costs beyond the VCSEL. A key element to the high-speed operation of these devices, allowing high data-rate transmission lies in size scalability to reduce the laser volume.

The technology we have developed will allow the UK to be at the heart of the global photonics market. And with Governments increasingly moving to cloud data storage, access to this supply chain is a key strategic capability.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PLUM DATA LIMITED	Plum Data Sustainability Index	£190,351	£152,281

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Plum Data is creating an objective sustainability index for the holiday park and camping sector.

The sector has no meaningful sustainability measurement. That matters because Covid-19 and change resulting from it have finally brought into stark clarity the need for park businesses to develop forward in a positive way with their local communities and to embark on the route towards positive environmental impact. Failure to do so will increasingly damage business's ability to operate effectively, gain permission for change and development, secure funding and attract desired customers. The index will help businesses and the sector as a whole to measure where they are now, plan their necessary evolution and communicate their messages to stakeholders who will more distinguish meaningful facts from greenwashing. The sector has natural advantages that mean this approach can strengthen its relative position and secure long term viability.

We will create an objective index that realistically reflects the sustainability performance of each park and business. The overall index will consist of a number of specific sub-indices driven by data that is relevant and easily reported by sector operators. It is not to be reliant on surveys or one-off studies or ad hoc recognition of isolated enhancements. The data collection will be continuous/regular and as automated or otherwise effortless as possible, and we will provide the outputs online on a park, group, region, subsector and industry basis. Just as with Plum's core commercial performance products, members will be able to see their own performance data, and how they stand and are evolving relative to peers and relevant parts of the industry (and perhaps other sectors). The comparator data will be anonymised and aggregated.

Our initial definition of sustainability measures the impact a business and its customers have on

- \* The environment
- \* The community

The environment includes impact related to:

- \* Energy
- \* Waste & pollution (those first two will include transport as well as on-site impacts)
- \* Water
- \* Food
- \* Biodiversity / Natural Capital
- \* These include existing impacts plus new ones such as extra PPE, packaging, plastic waste and non-use of public transport due to Covid-19

Built-environment including accommodation life-cycle

- \* Transport
- \* Community includes
- \* Local employment

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

- \* Economic benefit
- \* Positive interaction
- \* It may also include health and wellbeing of staff, customers and community

This project leverages the private investment already made into Plum Data, which has been built as an innovative online b2b software-as-a-service business to collect standardised raw commercial data from holiday park sector businesses, which it transforms into unique automatically market-benchmarked management decision data. That existing commercial activity and asset data will be added to the new sustainability data generated by the project to put the sustainability index into the context it needs usefully drive Covid-19 recovery and continuing sustainability improvements.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SBAR ENDURANCE LIMITED	Virtual Experiences App	£194,624	£155,699

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

As a result of COVID-19 the UK enforced strict lockdown and social distancing measures. Overnight countless industries and people's lives were affected, including the fitness industry and the way we exercise. With gyms forced to close and mass participation sporting events such as the London Marathon cancelled, many people searched for alternative ways to stay fit and healthy. Added to this, as the link between poor health and COVID-19 has become apparent (with those obese having a 33% greater risk of dying from COVID-19 (BBC\\_2020)), the nation has become acutely aware of importance of good health in relation to COVID-19. This is exemplified with the UK Government urging the nation must 'get match fit to fight the disease' (Sir Oliver Dowden) and over ¾ of the UK population taking up at least one form of new exercise since lockdown began (NuffieldHealth\\_2020).

As a result, the Interactive Fitness Market is booming. Even before COVID-19 was declared a global pandemic, Technavio reported an expected growth of £4.2bn during 2020-2024 for the Interactive Fitness Market and COVID-19 has only served to accelerate this. For example, the Health and Fitness app category witnessed 47% growth in Q2 2020 (DeveloperTech\\_2020); and Virtual Events have seen an extraordinary 70% uplift (RunSignUp\\_2020). What's more, this new wave of fitness looks here to stay. There is currently public unease about returning to mass fitness such as gyms, with reports suggesting 68% of people would now rather continue to exercise from home (Statista\\_2020); and the Government has stressed that any reopening of mass fitness outlets is both conditional and reversible. It's therefore unlikely that such an industry will return to business as usual any time soon.

Project lead Let's Do This (LDT) have seen first hand the potential of the Interactive Fitness Market. Having previously gained world class VC funding from the likes of Y Combinator, NFX and EQT, they have already built the UK's leading online marketplace for challenge events and experienced exceptional YOY growth. However C-19 and the ensuing cancellation of 1000s of challenge events then saw bookings on their site plummet and revenue quickly decline. LDT have pivoted by building a prototype for a free Virtual Experiences App, allowing small groups of people to come together virtually and motivate each other to reach their fitness goals through a diverse range of challenges. The app is currently in the early stages of development with a small user group. Yet with high retention rate amongst these users, there is strong indication that the app can be a viable alternative to gym memberships, in person mass participation events and expensive existing on-demand fitness. LDT plans to build on this foundational platform, leveraging the powers of group network effects and machine learning recommendations trained on health data, to offer both personalised fitness experiences and group participation to radically transform people's fitness and health. Ultimately, LDT aims to support as many people as possible in leading active lifestyles in both a COVID-19 and post COVID-19 era.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KOOR LTD	Online rehearsal and practice solution for choirs in isolation	£218,881	£175,105

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In the UK, there are around 3 million people choral singers. Worldwide, over 120 million people sing in choirs. Or at least they did before COVID-19\.

Koor (<https://koor.app>) is an app that was created to help choral singers, who struggle to read music.

75% of singers in choirs say that they struggle to learn their parts due to an inability to read music. 92% say that they would use an audio practice aid to help them learn.

Koor enables:

- \* singers to learn their parts by engaging with interactive recordings of professional singers, and
- \* use machine learning to show them if they are off-key, or their rhythm is wrong
- \* music directors to better guide their choir member's individual practice
- \* choir administrators to more efficiently manage their organisations

As a direct result of COVID-19, choral singing has been designated one of the most potentially risky activities to engage in. Choirs across the United Kingdom, and around the world, have been forced to stop their congregational activities for the foreseeable future; quite possibly not returning to normal until a vaccine is available.

The expectation is that choirs may not be able to reconvene until September 2021, at the earliest. That's literally tens of millions of people who are not able to participate in an activity that provided important social, health and wellbeing benefits.

To address this situation, Koor is working to develop an online rehearsal platform that will allow choirs to continue gathering and working virtually.

To achieve this goal, we will explore, experiment and develop technologies that will provide:

- \* lower audio and video latency
- \* vocal commands for use with smart speakers
- \* gestural control of audio and player functionalities

Our online platform will not only help community, worship and educational choirs continue to gather online during isolation. Beyond this global pandemic, it has the potential to make choral singing - with its health, social and wellbeing benefits - more accessible to people in smaller, more isolated communities and people with disabilities.

Koor can also support the sustainability of other arts organisations as they adapt to the 'new normal'; providing them with a platform on which to engage with their communities actively.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Individual musicians and music groups, in response to climate change and environmental concerns, are looking for ways to travel less. This project will result in a platform that will enable world-class conductors, soloists, composers and ensembles to engage with their global audience online to a level of satisfaction that has never before been possible.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SOUTHERN CONSTRUCTION GROUP LTD	Eco Heat surfaces	£157,565	£126,052

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Eco Heat is a first-of-its-kind, patented system that boasts public safety benefits as well as environmental advantages.

The system comprises a smooth, non-slip and fully permeable surface beneath which is a unique structure that makes it able to generate and transport renewable energy. The system transports excess heat from a certain location within a commercial or domestic building, such as a boiler room, to heat ground at low surface temperature, preventing it from freezing. During the warmer months, it collects and transports solar thermal energy to contribute towards commercial and domestic hot water demands.

Eco heat is taking renewable energy and using excess heat that already exists in buildings to create a safe walking / driving surface all year round. The resin surface also generates new renewable energy, cutting carbon emissions at the same time.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NQUIRINGMINDS LIMITED	Economic Recovery Analytics	£216,976	£173,581
BCP Council		£64,880	£64,880

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

NQM Economic Analyser applies artificial intelligence, statistical techniques and scenario modelling to the problem of local economic planning for resilience and recovery from Covid-19.

The economic health of the high street has been in decline pre Covid [1]. Many local authorities generate a significant portion of their revenue from business rates on high street properties. With a shrinking supply of central government money, local authorities must balance the requirements of stimulating economic growth and generating revenue. This issue has been further exacerbated by the huge impact that COVID-19 has had on the global economy, as well as the more local effects of lockdown and accelerating the trend of people moving to online shopping.

NQM Economic Analyser leverages a well developed portfolio of AI and data modelling techniques to help address these issues. By utilising historical and current business rates data, alongside a flexible model of economic health, economic planners are given the insights they need to plan for resilience and long term growth. More specifically, NQM Economic Analyser provides the following features:

1. Impact Analysis: Fine grained historical data, spliceable across many different variables helps provide evidence for the effectiveness of different strategies for high street rejuvenation.
2. Predictive Analytics: A nuanced model that learns from both local and broader economic trends, and provides a forecast for the future behaviour of the economy.
3. Scenario Planning: As recent events have shown, the past does not always inform the future. The scenario planning tool allows economic planners to ask "what if" questions about the effects of both state intervention and economic downturn.

The innovation at the core of the Economic Analyser is the use of dynamic Bayesian networks and Markov models, on top of traditional statistical methods to build a system that is both suited to predicting a steady state system, and a highly divergent scenario. This is enabled by the fusion of open data with more confidential billing information, the security of which is guaranteed through the use of NquiringMinds' Trusted Data Exchange.

Based on technology that has already been prototyped with Belfast City Council, the Economic Analyser is a refinement and evolution of a module within the LPRL fraud detection system.

[1] [<https://www.theguardian.com/business/2020/apr/30/pandemic-will-vastly-accelerate-decline-of-uk-high-street-mps-told>][0]

[0]: <https://www.theguardian.com/business/2020/apr/30/pandemic-will-vastly-accelerate-decline-of-uk-high-street-mps-told>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KOALAA LIMITED	Development of an immediate, post-surgery, upper-limb prosthesis: Wound soft, self-fittable and enabling critical rehabilitation and physiotherapy to start earlier for better healthcare outcomes.	£176,785	£141,428

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has further compounded the challenges faced by the NHS prosthetic service. At a time of movement restrictions and social distancing, traditional prosthesis is often unavailable or at best limited, reliant on a dedicated in-hospital appointment, Clinician and bespoke fitting appointment. This means amputees are missing out on critical early access to prosthesis, already having to wait over 6 months for first access - with COVID likely to increase this even further.

Koalaa aim to address these challenges with the development of the world's first post-surgery prosthesis - a soft, flexible device that can be fitted at home or via telemedicine within 24 hours of an operation.

Based upon our patented 'soft-socket' design, range of interchangeable tools and working with key NHS, patient and rehabilitation stakeholders, the revolutionary device will enable prosthesis use and rehabilitation to begin 6 months earlier than currently possible.

Furthermore, the flexible, standard design means it can be easily fitted to a wide range of residual limbs in a similar way to a sock - provided in discrete sizes and flexibly fit to the user's limb without intervention. This approach completely removes the intensive, expensive hands-on nature of the prosthesis fitting service currently that results in amputees put at considerable COVID risk attending appointment.

The proposed technology and design forms part of our portfolio of products aimed at addressing the high cost, high abandonment rate and poor comfort of current prosthesis, whilst helping address a key COVID-related challenge. The benefits of the technology are considerable and immediate.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BOOKING LIVE SOFTWARE LTD	Biodiversity and tourism management platform	£395,448	£173,997

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*Vision\*\***

Biodiversity is key to mitigating climate change, and it is also a key engine of tourism. However tourism can also be one of the most destructive forces for biodiversity. Without careful management, visitor activity can degrade green spaces, introduce alien species and damage ecosystems, in turn negatively affecting tourism itself, with both environmental and economic costs. Covid-19 has brought unique pressures to bear. Every time lockdown has been eased, a number of natural spaces have struggled to cope with a sudden influx of visitors. More importantly, established patterns of visitor engagement with biodiverse spaces can no longer be regarded as predictive of behaviour and usage patterns in a post-Covid world.

Our existing booking platform is already used to schedule visitors by leading custodians of biodiverse areas, such as the National Trust and local governments. The goal now is to empower these institutions to achieve new breakthroughs by integrating geographical information systems, cutting edge, AI-powered, predictive analytics, and behavioural prompts. This will allow institutions in charge of areas rich in biodiversity to understand, predict and manage visitor behaviour and interaction with natural spaces.

### **\*\*Key Objectives\*\***

\\* enable institutions to map and understand visitor behaviour, anticipate and identify behavioural patterns, and combine scheduling, geolocation and behavioural prompts to achieve a step change in sustainable behaviour.

\\* comply strictly with user consent and device availability, ensuring equitable access to facilities and services while providing permissioned access to data where available.

\\* use beacon technology, WiFi, Bluetooth and phone geolocation data to monitor population density at the micro-level, allow real time population density management, mitigate of overcrowding, track footfall and over/under utilisation of natural resources.

\\* enable environmental behaviour management through zone-based access scheduling to manage population density and intensity of resource use.

\\* provide behavioural interventions through notifications, vibrations and messaging enabling incentive programmes to maximise compliance with environmental requirements.

\\* feed the data into heuristic and machine learning models that can analyse, recognise and predict behavioural patterns to facilitate planning and adaptation.

### **\*\*Areas of Focus\*\***

a) local authorities

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

- b) National Trust and tourism institutions
- c) policy makers and research institutions
- d) visitors

**\*\*How it is Innovative\*\***

While there exist scheduling systems, geolocation apps, and behavioural nudges, nothing in the market integrates all these functionalities in a way that is usable and respects privacy and consent, while estimated visitor numbers do not operate at the geolocation level. One can estimate how many people have visited a beach or a forest, but not which spots at which times in what densities.

Our solution integrates all these aspects to innovate a tool that can go most of the way toward achieving environmentally successful behaviours, and significantly accelerate and improve society's capacity to combat climate change while maintaining economic prosperity.

Our innovation will make it easier to reconcile environmental and economic imperatives, and enable public sector and leading charities to progressively arrive at an environmentally sustainable "new normal".

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HAEMAIR LIMITED	Integrated Life Support System	£201,979	£161,583
AUTOMATEDTECHNOLOGIES LTD		£71,792	£57,434

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 attacks both the lungs and the kidneys and many patients suffer with both simultaneously. Haemair's novel integrated life support system treats both lung disease and kidney disease in one compact unit. Currently, for those suffering lung disease, the most effective treatment is Extracorporeal Life Support (ECLS). ECLS takes blood from the patient, passes it through an oxygenator that adds oxygen and removes carbon dioxide, then returns it to the body. Unlike mechanical ventilation, which damages the lungs of sedated patients, ECLS enables patients to remain conscious, to be able to speak and to have some mobility. For people suffering kidney disease, blood is taken from the body, passed through a dialyser that removes the toxins that would otherwise be removed by the kidneys, then returned to the body. For very ill patients, applying oxygenation and dialysis separately requires accessing the blood circulation at two different places. Consequently, it increases the risk and places an additional stress on the patient. It also surrounds the patient with blood lines. The proposed device performs oxygenation and dialysis in one compact unit that only requires one patient access point. It thus reduces the risk to the patient and is simpler for clinical staff to initiate and manage.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
REINFER LTD.	Deep learning solution for improved conversational data analysis for distributed customer facing teams	£214,660	£171,728

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Regardless of sector or size of operation, significant volumes of conversational data are generated daily through the interaction between a business and its customers as well as through internal communications. Despite the potential value of this data to improve its customer experience, operational activity and competitiveness, the ability to truly analyse the content of complex interactions generated by the large volume of phone calls, emails, on-website chat generated by internal and external customer communication is far from optimal with a current reliance on manual interpretation to perform this activity. With significant variations in content, the ability to automatically extract both the meaning of a communication as well as the intent is a highly complex task which is not possible through current call analytics products or AI based solutions which on rely specific metadata, key phrases or sentiment analysis.

Whilst this need has long been recognised, it has been significantly compounded as a result of the COVID pandemic as companies seek new opportunities to drive sales in order to survive with a disruption to the traditional ways of communicating amongst teams/customers and disparate working practices of sales teams particularly in an B2B environment. Despite the easing of lockdown measures, many employees (and departments) continue to operate remotely with more tasks than ever being delivered by digital channels and phone calls as a replacement for physical interactions/in-person sales meetings, and with the majority of sectors facing challenging market conditions, the need to better understand a client's needs and more quickly respond to evolving market opportunities has become even more critical.

Through the deployment of the first automated conversational intent recognition system capable of interpreting unstructured communications data from any form of communication and converting this from natural language to structured data, without the need for software expertise or additional coding input, Reinfer overcomes the limitations of both manual practice and emerging AI based solutions in this space. Whilst the ability to automate the interpretation of communication data has now been proven by Reinfer -- the ability to rapidly disseminate this across remote working sales and customer service teams has not. It is this capability that the proposed project seeks to deliver exploring the potential to be integrated into existing CRM systems and communication platforms e.g. slack and expanding functionality across wider communication channels.

If successful, the solution has the ability to deliver significant socioeconomic impact across multiple sectors supporting increased sales, operational efficiencies and as a valuable support tool for disparate working teams. The solution can play a critical role in supporting both the recovery of UK business and future growth as well as help prepare for a potential 'new world' where virtual customer engagement increasingly replaces traditional face-to-face meetings.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BIO-BEAN LIMITED	Developing the specification of dried spent coffee grounds as a sustainable material for use in a range of industries	£203,588	£162,870

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

bio-bean is the world's largest spent coffee grounds (SCG) recycling company, currently reprocessing ~7,000 tonnes of SCG per annum into solid biofuels. The company has recently launched a natural flavour product extracted from food grade SCG. SCG is a high-volume waste problem in the order of over 500,000 tonnes in the UK alone, the disposal of which has a serious environmental impact.

The bio-bean factory is unique in deploying its technology, in particular its drying technology, on an industrial scale to transform what was once a waste into a useful, sustainable material for a range of end products and uses. After considerable recent investment, the bio-bean factory now has the capacity to reliably reprocess in excess of 16,000t of SCG per annum.

At present the SCG once dried is mixed with other bio-based residues and manufactured into the solid biofuels that bio-bean currently sells as coffee pellets and Coffee Logs.

In the last 12 months bio-bean has been approached by various businesses wishing to use dried SCG in a wide range of potential large-scale applications. Each of these uses would see SCG, a biomaterial formerly considered a waste, replace a virgin material that must be specifically produced or extracted for these applications.

The value of SCG/t when used in any one of these applications exceeds its value when used as a solid biofuel which makes developing the potential of SCG to be used in these applications an attractive commercial opportunity.

However, in order for SCG to be used consistently and at the potential scale for which market demand exists it needs to be dried to a far more specific and narrower product specification than that which the SCG for solid biofuel purposes meets and the particle size of the grounds reduced.

This project therefore seeks to develop bio-bean's SCG drying capability so that it can dry its SCG to the required product specification and to do this consistently, taking into account the wide range of feedstock characteristics which arise as a result of the SCG feedstock being a waste. Further the project will research, test and develop a scaled method to reduce the particle size of the dried SCG.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INAVYA VENTURES LTD	Urban BAMBOOS: Black Asian Minority Bespoke Obesity Support	£100,797	£60,478
Imperial College Healthcare NHS Trust		£42,689	£42,689

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 is causing health care providers globally to transform - including the NHS. To manage healthcare demand safely and optimally, hospitals are changing how patients access and use services. There is also considerable focus on prevention and developing remote care, in an effort to keep people healthy and outside of hospital - this is particularly true for 7.4 million people living with heart and circulatory diseases in the UK.

Heart and circulatory diseases cause more than a quarter (27%) of all deaths in the UK. Around 80 percent of people with heart and circulatory diseases have at least one other health condition. Healthcare costs relating to heart and circulatory diseases are estimated at £9 billion each year. Cardiovascular disease cost to the UK economy (including premature death, disability and informal costs) is estimated to be £19 billion each year

Black, Asian and Minority Ethnic (BAME) people are significantly more likely to develop and die early from coronary heart disease than white Europeans. African and African Caribbean people are at higher risk of developing high blood pressure and having a stroke than other ethnic groups. And, Africans, African Caribbeans and South Asians are more likely to develop Type 2 diabetes than the rest of the population. Obesity is also strongly associated with increased risk of COVID-19 deaths.

As obesity contributes to coronary heart disease and type 2 diabetes and increased COVID-19 deaths. The very high prevalence of overweight and obesity in UK adults is a pressing concern (74% of Black people, 56% of Asians).

It is clear that overweight and obesity can be prevented and reversed. To achieve excess weight loss, patient engagement - eating well and physical activity - is essential. There is clear evidence that BAME patients are significantly less likely to engage with healthcare providers and to follow their prescribed care plans. Although digital health services have good potential to promote health, they need to be culturally sensitive. There is a pressing need to reduce AI-bias, as it is limiting health for BAME populations.

Project BAMBOOS aims to create a Social Prescription toolset to reduce levels of obesity and overweight in the BAME population. Losing excess weight will help to reduce risk for heart disease, diabetes and Covid-19 deaths, and related costs.

To help people lose excess weight, the Social Prescription will leverage Avatr AI capability - enhanced with a new BAME ontology to be developed - to enable a user to generate a digital profile of their self. This profile is designed to support development of new knowledge, skills, and capabilities to help the person eat well and to take-up exercise, with their local neighbourhood optimally positioned as an enabler for weight loss.

Taking a person-centred and contextualised approach - including co-development with BAME patients from Hammersmith Imperial Health - Inavya and Imperial Hammersmith Hospital will collaborate on this 9-month project. Our aim is to develop tools that support delivery of personalised medicine, enhanced with novel social prescription and AI that support weight loss for BAME patients.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRANSREPORT LIMITED	A Digital Platform to Enable Retail Equality and Equity for People with Disabilities	£195,517	£97,758

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

The project will produce a first-of-a-kind innovative commercial platform designed to help disabled people with their everyday purchases, whilst supporting retailers in knowledgeably, sensitively and directly accessing this community to create additional revenue streams during the immediate and future impact of Covid-19.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Akerlof Ltd	Decarbonising Precast Concrete	£75,814	£60,651
FORTERRA BUILDING PRODUCTS LIMITED		£172,809	£138,247
P.C.E. GROUP HOLDINGS LIMITED		£192,172	£153,738

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Economic and industry forecasts indicate a prolonged impact from COVID-19 on the UK economy and more specifically the construction sector. The Construction Product Association forecast a 25% fall during 2020, with certain commentators predicting output in 2021 to be 20% lower than 2019\.

Manufacturers and suppliers within the industry have been forced to restructure operations to reflect anticipated declines in the short and medium-term; with employee reductions and mothballing of facilities. Business survival strategies are being implemented at the same time the industry is challenged to reinvent to address strategic priorities of innovation and net zero carbon. This is illustrated no more vividly than within the precast concrete market.

As Government seeks to expedite the procurement and construction of viable projects, COVID-19 has stimulated a turning point in the private sector's adoption of modern methods of construction. AMA research forecast that the precast concrete sector will grow by 18% to £2.3.bn by 2024, however the sectors ability to accelerate investment in decarbonisation is compromised.

As a cement based product, traditional concrete manufacture is a fuel intensive, electro-intensive and CO2 intensive process, said to be responsible for 4-8% of the world's CO2\.

An increased demand for products and market growth, stimulated as a result of COVID, could, without corresponding innovation, represent a threat to the clean growth strategy of the UK.

Concrete is however a unique material in that the specifier has the ability to directly influence its constituent parts to ensure an optimum carbon footprint that meets performance criteria and addresses the design imperatives of resource and energy efficiency within a whole life context, that also address the precepts of a circular economy.

Significant carbon savings can be realised through the design decisions of architects and engineers, in collaboration with precast manufacturers. Material efficient structure can be optimised to minimise carbon, however supply side barriers (e.g. availability and cost of raw materials) and demand side barriers (e.g. restrictions in concrete standards) currently limit their application and diffusion within the marketplace.

Engaging key market actors within the value chain, this project plans to overcome these barriers, to deliver decarbonisation without compromising sector competitiveness. Benchmarked against the performance of an existing public sector portfolio, this project will accelerate the pathway towards net zero, through improved design, product selection and manufacturing and construction processes of precast concrete components.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CHEESECAKE ENERGY LIMITED	EV Tanker - Deploying thermal and compressed air energy storage for electric vehicle charging	£326,583	£173,089

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Electrification of transport is the single greatest opportunity to cause dramatic reductions in carbon emissions and air quality concerns from road usage. Achieving these high-priority aims calls for rapid and widespread adoption of electric vehicles (EVs) across the UK. As more people switch to EVs, cities will need to think how to provide charge to all those new vehicles. Retrofitting petrol stations and parking spaces with EV charging points is only part of the solution. Many of the existing petrol stations or new sites looking to install EV chargers will discover that the grid connection available cannot handle those levels of power. In many cases, upgrading the connection is infeasible as it is a very expensive and lengthy job.

Energy storage can help solve this issue. Charging stations can charge their energy store when there are no EVs around at a rate that is manageable for their grid connection. When called upon, the energy store can provide charge at a much faster rate than the grid connection alone would be able to. This approach allows installing EV chargers without upgrading the grid connection and it also allows the stations to reduce their electricity costs by charging the store at off-peak times.

Lithium-ion batteries from EVs could be used for this; however, they are expensive and they entail the mining of materials that are difficult to recycle, causing negative environmental impacts.

CEL is developing a new, green, and cost-effective energy storage system for EV charging stations called EVTanker. The system takes electricity from the grid and stores a part of it as heat and another part as pressurised air. The system uses electrically driven ex-service truck engines as the power-conversion machines for putting electricity into storage and withdrawing it when needed. Some key features of EVTanker are that: its elements are highly sustainable, it's safe and straightforward to operate, its main components will last for decades and it costs less than the cheapest lithium-ion batteries.

CEL has developed a prototype system to demonstrate the technology. The objective of this project is to take the technology from a full-scale laboratory prototype to a deployed pilot system. We will install and commission the pilot system at a local county council's vehicle depot, where it will be tested under real-life conditions.

CEL will partner with Open Energi to develop a robust control unit, which is one of the main prerequisites for transforming the laboratory prototype into an operational pilot plant. The control system will allow operating the system remotely and monitor the 'health' of different components. It will also be capable of scheduling charge/ discharge cycles to meet specific objectives, such as minimising electricity costs or ensuring that the energy store is charged using the greenest electricity possible.

At the end of this project, CEL will have installed, commissioned and tested the first energy store of this kind with a customer in the UK. The project will help boost the country's uptake of EVs and propel us towards a net-zero future.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WHITE FROG PUBLISHING LIMITED	Automatic DfMA Design Generator (ADAGE): An Internet of Things tool to instill adoption of DfMA by Building Designers	£130,009	£104,007
INTENTTECH LIMITED		£120,002	£96,002
Leeds Beckett University		£19,985	£19,985
POLLARD THOMAS EDWARDS LLP		£99,963	£79,970
University of Hertfordshire		£127,745	£127,745

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*DEFINITIONS\*\***

**\*\*Concept-design:\*\*** Design team's initial response to a project brief.

**\*\*Detailed-design:\*\*** A design with full details, developed from approved concept-design

### **\*\*SUMMARY\*\***

Due to coronavirus lockdown, UK Construction Total Activity Index dropped to 39.3 in March from 52.6 in February; the steepest fall in construction output in 11-years (IHS-Markit, 2020). Government wants to use the coronavirus crisis as an opportunity "to build the homes" and plans to "build build build" as part of recovery plans for construction industry and wider economy, announcing £5bn infrastructure and £12billion affordable newbuild homes investments (PrimeMinister's office,2020). Unfortunately, current/traditional construction methods are too inefficient to achieve this in the required time as they are mostly responsible for the current record housing backlog/deficit of 4million-homes (National Housing Federation,2018; BBC Housing-Briefing,2020; McKinsey & Company,2019), and were way off-track to achieve national infrastructure programme's proposed £650billion projects worth by 2025

Current/traditional construction methods are slow, costly, poor quality and relatively unsafe. Compared to manufacturing industry, its poor productivity has cost UK economy £140billion (including tax) over 20years (Mace,2018). Alluding to the problem, the government backs construction industry in its attempt to emulate manufacturing industry by switching to Design for Manufacture and Assembly (DfMA) (Construction Sector Deal, 2018). DfMA trial projects led to reduction of 60%, 44% and 70%+ in duration, cost and onsite labour respectively, 73% improvement in quality and 80% improvement in overall productivity compared to traditional methods (RIBA,2008).

Despite the many gains, efforts towards DfMA approach's wider adoption has been unsuccessful, with less than 5% of designers employing the approach. Research by CIOB, RIBA and AECOM show the lack of adoption is because current designers were trained/taught to design for construction and have practised this method for long. Attempts to use CPD trainings have yielded only slight benefit as designers claim being too busy. However, the pandemic has now meant near zero trainees/designers registering, with the training companies and construction output bearing the brunt

This project thus aims to use digital means to encourage a wider DfMA adoption by developing a BIM software plugin that automatically generates DfMA concept-designs based on key building design parameters from client/project brief (e.g. material choice, building use/purpose, etc.)

The proposed plugin will use Internet of Things, Blockchain Technology, cloud computing, artificial intelligence algorithms (AIA) and big data analytics and include the following:

1)**\*\*Automatic DfMA concept-design generator:\*\*** will generate multiple concept-designs based on input parameters. Designs will be editable to achieve 'detailed-design' to suit designers' preference. Designs will be generated using:

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

- 1a) Parametric modelling AIAs which will use historic data of former DfMA designs to produce new solutions
- 1b) Generative design AIAs to improve new solutions, producing many valid high performance but cost effective options.
- 2) \*\*DfMA component adviser:\*\* will suggest components (e.g. lattice-slab, shell-beams etc.) usable to edit an adopted DfMA concept-design to achieve detailed-design that suits designers' preference.
- 3) \*\*DfMA component availability and price checker:\*\* will provide information on DfMA components prices, delivery times, availability, suppliers' locations, etc.
- 4) \*\*DfMA designs comparison tool:\*\* will compare selected generated/edited designs based on total cost, estimated duration, etc.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SPINKO LIMITED	Next Generation Eco-Beds and COVID-19 Related Customer Experience	£204,652	£163,722
BINARY IS LIMITED		£86,080	£68,864

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

HSPINKS dominates the niche UK luxury mattress market with hand-built beds. The business has a successful components division and overseas JVs, supplying other brands internationally with its patented spring technology for mattress cores. It has won five Queens awards for innovation/export/environmental impacts and will partner with Binary Consultants in this project to support the bed industry in reacting to COVID related online bed sales.

The project will develop a next generation eco-bed and divan whilst replicating the tactile showroom experience utilising AI and IOT technology.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ORBITAL ASTRONAUTICS LTD	Project Vesta: Satellite AIT Facility Batch Productionisation	£218,712	£174,970
HEBRON SYSTEMS LTD		£121,711	£97,369

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Development of inspection and assembly processes for nanosatellite subsystem product-lines.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GEPALON NETWORKS LTD	AI-augmented collaboration platform to improve endoscopic diagnostic and surgical procedures	£206,739	£165,391

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Gepalon Networks Ltd (Gepalon) is a rapidly growing UK-based SME specialising in medtech. Gepalon is reducing risk in surgery by allowing experts to collaborate remotely using video telestration augmented by AI/Deep Learning. The innovation will allow medical research teams to define, build and train AI models that can then be deployed in the platform for diagnostics (the automatic detection of malignancy), with the goal of providing augmented guidance in real-time to surgeons performing keyhole surgery where AI can identify and visualise malignancy during the operation. Gepalon's platform could decrease the error rate in cancer diagnoses by 5%.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ELECTROGENIC LTD.	Low-cost electric Land Rovers for farmers and landowners	£174,912	£139,930
Cardiff University		£82,875	£82,875
Worthy Farm (A M J Eavis, sole trader)		£157,199	£125,759

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Electrogenic in partnership with Cardiff University and Worthy Farm (Glastonbury Festival) aims to undertake an innovative project that will convert four diesel Land Rover Defenders into electrically powered vehicles and deploy them on a working farm (Worthy Farm). We're doing this to understand the demands and current limitations that an electric powered 'working' vehicle may have and to optimise the design of the electric powertrain to address these limitations.

To date there is very limited data, if any, on how an electric powered four-wheel drive vehicle operates as a working vehicle on a farm. Can it out-perform the diesel version and complete tasks more effectively? Gathering that data through prototyping means we can optimise battery requirements, charging stations and build in re-charging systems via the farms own power source and create a circular economy for farming vehicles.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SUSTAINABLE WORKSPACES C.I.C.	Unlocking Commercial Property to be Safe, Healthy and Sustainable	£206,517	£165,214
OPTIMITY LIMITED		£178,603	£142,882

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The coronavirus (COVID-19) outbreak and following containment measures will have a long-lasting impact on the economy, businesses and working lives. In a recent survey conducted by CIPS on 1,000 workers in the UK, almost half (47%) are concerned about catching COVID-19 at work and 44% are anxious about returning to work in a healthy and safe way. Coupled with this, commercial property landlords are facing significant issues with a number of major landlords receiving only 20% of rent expected in Q3\ . Unless building user confidence strengthens, significant risks to the \$9.6 trillion global market will grow further.

COVID-19 also presents an opportunity to deliver an economic recovery that accelerates the transition to a cleaner, net-zero emissions economy and strengthens the country's resilience to the impacts of climate change. The Government has committed the UK to binding carbon targets to reduce emissions by 80% below 1990 levels by 2050 and London has set a goal of a 60% reduction by 2025\ . It is estimated that 70% of existing buildings will still be in use in 2050\ . Reducing the carbon emissions of these properties and improving the health/well-being of occupants is therefore vital if we are to meet such challenging targets.

In response, Sustainable Workspaces has developed an innovative system integration platform for use in the retrofitting of operational commercial property. The combination of technologies to monitor people's use of a workspace, control of the environment particularly air quality, and intelligently change and inform users of risks and performance is cutting edge. A highly prominent flagship R&D project in central London, with delivery from Q4 2020 and live operational usage through 2021 will form the test bed to quickly evidence real world action using occupier feedback. The world class partners in the project will be able to exploit the project outcomes across their global commercial property activities, driving commercial growth.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EYFSHOME LTD	Early Years platform for learning activities to support blended and hybrid learning, Nurseries, Parents and carers	£123,084	£98,467

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

We run EYFSHome.com, a service that provides free learning activities each day and a story to 3-5s. It is based on EY learning goals, the curriculum and quality assured. The content creators are teachers, authors and poets, with extras from performers and educationalists.

We are beginning to create revenue streams to continue this support and want to test and develop a platform to provide CPD and Channels so that Nursery schools can share their own learning programs for \*\*blended and hybrid learning.\*\*

We believe that it is crucial this age group doesn't accidentally get left behind, and that we support their parents carers and allow bursaries to focus on the children by taking some of the strain of planning from them.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DARK INTELLIGENCE LIMITED	Developing novel software to monitor the Darknet and prevent cyber attacks and data loss with 15-minute response times for alerts	£209,234	£167,387

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

**\*\*Public Description\*\***

The current protections available to prevent data from being stolen from organisations are inadequate. Incidents are increasing, with 46% of businesses and 26% of charities reporting cybersecurity breaches or attacks within the last 12 months (Cybersecurity Breaches Survey 2020).

Dark Intelligence Limited is a rapidly growing UK-based SME that specialises in cybersecurity. DarkIntel was founded by John Wrightson, Vince Warrington, Steve Smith and Simon Webster. The company is solving an innovation need that could help reduce the impact of state-backed or industrial-scale hacking by 30% while also generating a year-5 post-project revenue of £45M. This is in the form of a software that proactively identifies activity on the Darknet prior to data theft.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FUTURE DJS LTD	Virtuoso - The worlds virtual stage for music education, inspiring the musicians of tomorrow.	£212,041	£169,633

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

During the COVID-19 pandemic many countries decided to close schools, colleges and universities. The dilemma policymakers faced were between closing schools (reducing contact and saving lives) and keeping them open (allowing workers to work and maintaining the economy). Teaching is now moving online, on an untested and unprecedented scale. Student assessments are also moving online, with a lot of trial and error and uncertainty for everyone going forward.

The global online education market has a projected growth rate of 10.26% to reach a total market size of US\$286billion by 2023\ . The market size for live streaming in education grew from US\$14.94 billion in 2014 to US\$23.44 billion in 2016 pre Covid-19\ . Today with the impact of COVID-19 there will be a hyper acceleration growth of these markets and a massive net shift to a B2C education models. In the UK Music provision will be severely restricted or removed in state schools from September 2020\ . Of the 3m young people teaching themselves music at home, 1.75m are learning to Dj, produce and MC.

In response to global online trends and the impact of COVID-19, FutureDJs have developed a new online virtual live streaming teaching service, called "Virtuoso" the worlds virtual stage for music education with the goal of making music education accessible for everyone. Following 3 years of groundwork teaching and delivering courses in schools around the country in electronic music, FutureDJs have devised a highly scalable distribution model with multiple revenue streams for the whole music industry, artists, education facilities and teachers.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OCASTA STUDIOS LIMITED	Deliver worldwide access to clinical case remote learning for medical students and schools, powered by UK medical school expertise	£164,934	£131,947

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Driven by restrictions placed on person to person medical teaching by the COVID-19 pandemic UK medical schools have through a collaborative effort organised by the Medical Schools Council widely adopted the CAPSULE clinical case based remote learning platform (<https://info.capsule.ac.uk>).

CAPSULE has been developed by the Brighton & Sussex Medical School and Ocasta, a leading eLearning solutions provider. CAPSULE is a unique resource as it contains over 650 clinical cases with 3,500 questions, including medicine, surgery, paediatrics, psychiatry, therapeutics, obstetrics and gynaecology, general practice and professional studies. Content is supported by an editorial board of senior clinicians from all specialities and from schools across the UK, with a rolling process of core review, case editing and selective case additions to maintain active and relevant content. Access to cases is via the web and mobile devices with scoring, cohort comparisons and progress tracked to ensure learning is fully embedded.

The adoption has enabled more than 24,000 UK students to continue their clinical studies remotely and schools to prepare for further disruption in the coming months, while also gaining new understandings of student progress through advanced analytics. During the UK deployment it became apparent that the urgent need to support clinical teaching is a worldwide issue and it is on this unmet need the project is focused.

Since May 2020 interest in CAPSULE has been received from students and medical schools across multiple countries including Australia, New Zealand, Ireland, Dubai, Ghana, Cyprus, Bangladesh, Malaysia, Singapore and Malawi. Access to high quality medical resources remains scarce while the ability to fund such access varies widely. Our project is aimed at adding functionality and scalability to CAPSULE to enable and support a worldwide deployment, given these wide varieties in resources and the difficulty in providing global support.

The global rollout of CAPSULE will also serve to showcase the skills of UK medical schools to a broad audience and support the sustainability of medical education across a broad and diverse geography. The availability of medical professionals around the world is under pressure, CAPSULE has an opportunity to help alleviate the shortfall while improving standards everywhere.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ARIMON LIMITED	Accelerate an urgent sustainable economic recovery from Covid19 in the UK mortgage market : Applying an AI lens	£255,239	£173,563
University of Surrey		£57,971	£57,971

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Digilytics is a fast growing UK-based SME specialising in Artificial Intelligence. Digilytics is led by Arindom Basu, a technology entrepreneur with 30 years' experience in developing and introducing disruptive technology in financial services. The mortgage application process is a complex and lengthy funding process. The mortgage origination process alone involves the manual processing of around 100 different types of paper documentation. Multiple duplications can occur and errors lead to lengthy and unnecessary delays. Digilytics' innovation will combine computer vision, machine learning and NLP technology to create first-time-right mortgage applications at scale.

In May 2020, the Bank of England warned that the UK economy is facing the sharpest downturn since 1706\ . The mortgage sector has been one of the worst-affected sectors by the COVID-19 crisis. First-time home buyers, vulnerable and underprivileged areas and SME businesses have been greatly affected. UK Finance states that the two million repayment holidays have increased the cost of operations and lenders have withdrawn almost two-thirds of their products representing over 75% LTV (Williams, June 2020).

The innovation contributes to more sustainable financing in a number of ways. Firstly, going paperless will lead to environmental benefits. With a simpler and streamlined process, employees can be redeployed to where more human interaction is necessary, providing social benefits, greater customer satisfaction and less reputational risk as well as favourable views by regulators during on-site examinations. This will lead to more favorable governance benefits. Overall, the innovation fits very well within an ESG framework. The reduction in transaction costs should lead to more affordable credit availability and financial stability.

The innovation will achieve one-shot learning of mortgage documents leveraging advanced techniques such as Financial BERT and GPT3\ . Validation of extracted data at document and cross-document levels in real-time and at scale will be made possible through innovative software architecture and engineering that leverages massively parallel processing.

In summary, the innovation project is a means to more sustainable finance post Covid19 incorporating environmental, social and governance concerns.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PRIMA MEDICAL LIMITED	Electrosurgical Smoke Evacuation Forceps Launch	£122,480	£97,984

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### BACKGROUND

Electrosurgery is used in >80% of surgeries, to cut tissue and control bleeding, and involves administering a high-frequency current to target tissue through an accessory selected to result in a particular surgical outcome, causing a cutting or coagulating effect.

Electrosurgery produces smoke, which is made up of 95% water vapour and 5% "other matter". The latter poses a threat to staff and patients, being comprised of volatile organic compounds including hydrogen cyanide, carbon monoxide, viruses, bacteria, and hydrocarbons such as benzene and toluene.

The Association of Perioperative Registered Nurses (AORN) has found:

"Using an electrosurgery device on one gram of tissue is akin to inhaling the smoke from six unfiltered cigarettes in 15 minutes".

"perioperative nurses experience twice the incidence of many respiratory problems as compared to the general population".

There are solutions on the market which are used to control this waste - however, the application of this safety feature to other instruments has been limited by inadequate design. Surgeons require a variety of tools, but the products available on the market cater to only one - the monopolar fingerswitch.

### COVID-19 RELEVANCE

Patients are presenting with symptoms across several organ systems, suggesting viral presence in tissue outside of the respiratory system. Whilst there have not yet been any comprehensive studies regarding Covid-19 transmission through surgical smoke, other viruses are known to.

As a result, smoke evacuation is now being recommended for use by various bodies:

"If available, monopolar diathermy pencils with attached smoke evacuators should be used" (SAGES, USA 30/03/2020)

"Liberal use of suction devices to remove smoke and aerosol during operations" (American college of surgeons 21/03/2020)

### COMPANY/PROJECT

Prima has a 17-year history of delivering innovation in electrosurgery - Our devices are used in operating theatres across the UK, Europe and beyond. Recently, we have been attempting to rectify this global design oversight, which has become doubly important due to Covid-19.

Forceps are a major segment of the market, and represent the most commonly used "tool" other than the fingerswitch, required for any procedure where the clamping of a vessel to stop bleeding, or a similarly haemostatic effect, is desired.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

In line with this, Prima Medical has designed a world first - the only forcep which integrates smoke evacuation, and the only forcep with hand-activation (usually done by foot-pedal), to allow the surgeon greater control.

In countries where SE is mandatory, it is commonplace for a nurse to attend just to hold the evacuation tubing - meaning that all procedures require another staff member and another device. In this sense, we offer a safety benefit for staff & budgetary savings for hospital administrators. Removal of the "additional device" will also have an effect on the environmental impact of each procedure, as the level of single-use plastic will be reduced.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SYM-WALL PLANT ENGINEERING LTD	Aqueous Ozone Decontamination System (AODS)	£322,476	£174,508

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Sym-Wall Plant Engineering Ltd (SPE) of Eastwood, Nottinghamshire is pioneering the development of a new industrial "aqueous ozone decontamination system (AODS)", termed "Sym-Hawk" for initial deployment in December 2020\.

The system is a formidable killer of the SARS-CoV-2 virus strain and is designed for rapid, thorough and scalable decontamination of ambulances, buses, trams, trains, aircraft and public spaces including offices, shops, restaurants, gymnasiums, theatres and arenas.

The system is based on the delivery of optimal "aqueous ozone" mist which ensures efficient contact with all contact surfaces in the ambient space, leaving the area fully decontaminated for safe follow-up use and occupation. The system is deployed as a stand-alone and self-sufficient dispenser. With its on-board supply of water and power generation the system draws in the local ambient air which is purified and processed to produce the required ozone mist in the correct form for the eradication of the pathogen.

The core of the AODS is the unique and proprietary "Engine" which controls the in-situ manufacture of the "aqueous ozone" and around which bespoke platforms are developed for standard and niche applications. The AODS is deployed in three categories, viz mobile, transportable and fixed variants, the latter being permanent fixtures in large infrastructures such as stadiums and arenas.

The benefits of the system are its thorough effectiveness in killing the virus, the speed of its decontamination process and the absence of any adverse after-effects on human health, the ozone reverting rapidly to breathable oxygen after the anti-virus process. By avoiding the side-effects of chlorine and chemical based disinfectant, and with no pollutants, the system represents a healthy and eco-friendly solution for the future.

The system can be deployed in different scaled options for mobile, transportable or fixed installations and is suited to a range of private, commercial, government and defence applications. Since it does not require replenishment with expensive chemicals or disinfectant products (only air, water and electricity are required) the recurring operating costs are minimal and the system is affordable in all sectors. It is intended that "Sym-Hawk" will play a major role through and beyond the current pandemic crisis in helping to establish health, safety and reassurance as the country returns to a "new normal" lifestyle. It is expected that the versatility and flexibility of AODS to meet a wide range of decontamination demands across the public, private, medical, defence and security sectors will lead to its rapid adoption in then UK from December 2020 with expansion already planned into the EU in 2021\.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ECONIC TECHNOLOGIES LTD	Novel CO2 Utilization Catalyst Recovery and Recycling	£258,038	£172,885

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Econic's innovative catalyst technology allows 10-43wt% of high cost fossil-based feedstock to be replaced with significantly lower cost captured CO<sub>2</sub> to produce polyols, the building blocks for polyurethane, at lower cost, with enhanced properties and more sustainably. The process to produce polyols using this patent protected catalyst technology is operated on demonstration unit scale (65L) validating that the process operates efficiently at low pressure, uniquely enabling retrofit to existing polyether polyol production assets and producing stable materials with matching or better performance characteristics. This proposal builds upon that foundational catalyst technology(TRL6); developing additional catalyst recovery, recycling and regeneration innovations which will enhance the economics of catalyst production and provide an additional circular recovery loop in the value chain.

This project validates a catalyst recycling process: capturing and regenerating spent catalyst to enable multiple uses, significantly reducing volumes of virgin material manufactured, feedstock usage, manufacturing complexity and reducing hazardous waste from the polymerisation process. This will significantly reduce catalyst manufacturing costs and further savings will be realised in our customer's waste treatment costs. By increasing sustainability of the process we reduce barriers to adoption and establish a platform for Econic and polyol producers to operate a circular economy model.

To date, we have demonstrated lab-scale (TRL2) feasibility of multiple conceptual routes for catalyst recovery and regeneration achieving 'as-new' catalytic performance. Forward development requires demonstrator (TRL6) scale processes to address key technical challenges for efficient scale-up and optimised performance. This will bring catalyst recycling TRL in line with the core process.

Econic relies on global partnerships to drive commercialisation. Suspension of a leading European customer partner's R&D activities, as a direct result of Covid-19 impact on their business, has suspended scheduled to semi-commercial scale trials to validate the Econic technology (including catalyst recovery process) at scale. Delaying parallel activities with toll manufacturers to develop catalyst recovery supply chain and validate economics. Econic must bring this work inhouse to ensure completion of the programme to validate the recovery and recycle process and meet license timelines of other pipeline customers. The work is essential to maintain the pace of commercialisation of the technology which underpins the delivery of Econic's business plan and continued investment on its growth pathway.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
THOMAS SWAN & CO.LIMITED	Project STORM - SusTainable OxychloRination developMent	£134,705	£107,764
University of Nottingham		£52,500	£52,500

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The COVID-19 pandemic has dramatically increased demand for a leading Thomas Swan & Co. Ltd (TSCL) product. TSCL have invested to increase capacity by exploiting a new process developed in-house to increase capacity, maximise atom efficiency and reduce energy use. The key raw material is sourced overseas with >100% price increases experienced linked to the pandemic. It is imperative that TSCL maximise the yield of from every kilogramme of raw material charged to the new process.

TSCL performed the process development by consulting the academic literature and using empirical studies and knowledge gained from over 20 years of operation of the previous manufacture process. Whilst this approach has been successful, detailed mechanistic understanding of this chemistry remains elusive as the literature does not have a consistent view of the mechanism of oxychlorination.

TSCL and the University of Nottingham (UoN) aim to address this by performing experimental and development studies to elucidate the mechanism of oxychlorination and apply this knowledge to drive process optimisation of the newly commissioned installation and support the development of new technologies. This will enhance TSCL's competitive advantage in global manufacture of this product.

By the end of the project TSCL and UoN will have increased their knowledge of the mechanism of oxychlorination and applied this knowledge:

\\*To the new process to enhance capacity, maximise atom efficiency (reduce by-products) and reduce energy use.

\\*To design new technologies to enhance the sustainability of manufacture.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ROHME RECRUITMENT OF HEALTHCARE AND MEDICAL EXPERTS LTD	An automated, AI-enabled hospital staff e-roster system that can predict vacancies and automatically fill them via a smart matching system.	£219,103	£161,133

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

**\*\*Public Description\*\***

Rohme Recruitment of Healthcare and Medical Experts (Rohme) is a rapidly growing UK-based SME specialising in healthcare. Rohme was founded by Fabio Trovato Monastra (CEO -- Nurse and Deputy Manager as background), Chris Minas (CTO and Director of multi-awarded technology companies) and Henry Atkinson (Divisional Director for Surgery and Cancer Services at North Middlesex University Hospital). A shortage of healthcare workers costs the NHS £2.4 billion every year. The temporary staff recruitment process is managed by agencies and the service is slow, inefficient and expensive. Rohme is developing a web-platform based on AI that matches the right healthcare professional with the right job in seconds.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GEBLER ASSOCIATES LIMITED	Occupancy Planning and Environmental Risk Analysis - OPERA	£212,454	£169,963
WORKPLACE FUTURES GROUP LIMITED		£62,069	£49,655

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Remote working established under Covid 19 lockdown will have a long term impact and businesses of all sizes face having to rethink the role of the office in their organisations. This will require space planning for new normal and distanced contingencies risk assessed to support safe return to work planning. The project will introduce software algorithms to the iteration of spatial planning, environmental performance and risk assessment. Project partners GAL and WF are leaders in the field of architecture and workplace design and delivery and at the forefront of applying software solutions into design in the built environment.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACU-FLOW LIMITED	New Generation of Nebulisers for Efficient Respiratory Drug Delivery	£144,760	£115,808
University of Glasgow		£43,771	£43,771

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Acu-Flow will develop a new, unique innovative functionality for its new nebuliser platform to enable inhalation delivery of liquid formulations for the precision delivery of medicines to the lungs. According to the World Health Organisation, respiratory diseases are known as the leading causes of death and disability in the world, with an estimated clinical cost of €400bn/year. In the UK, the British Lung Foundation estimates that 10,000 people are diagnosed with a lung disorder every week with a £9.9bn direct cost for NHS and £1.2bn cost to the wider economy. Generally, patients with such respiratory diseases are treated by the inhalation of aerosols, where the effective delivery of medication is crucially dependent upon the droplet size distribution. Larger drops are caught in the upper respiratory tract, while smaller ones are exhaled before they can be adsorbed - neither reach the patient.

Nebulisers are also becoming important in enabling new drugs for COVID-19 treatment, reshaping the market. For example, 29 (of 48) drugs in development for COVID-19 are delivered by inhalation, including the recently successful drug by Synairgen.

Despite advances in the current state-of-the-art nebuliser technology (including both jet and mesh systems), there are still two key technical constraints that limit the benefits to patients, namely (i) a limited range of acceptable formulation properties; and (ii) relatively inefficient delivery. These limitations result in patients needing specific nebulisers for each drug, with many individuals with chronic diseases requiring different ones. The low efficiency can lead to long delivery times (e.g. people with cystic fibrosis (CF) can spend 20min nebulising and 20min cleaning the devices, six times per day), leading to challenges in adherence to treatment. These limitations also restrict the adoption of new drugs and vaccines, which have promising potential in treating difficult diseases.

Working with the University of Glasgow, Acu-Flow will develop essential technologies required to demonstrate its new nebuliser platform. This platform uses a unique method, based on the interactions between acoustics, microstructured arrays and liquids, to control droplet size in the aerosols generated, within the clinically effective range, with a proven ability to enable further precision of delivery.

The platform has already demonstrated its capability to nebulise a wide range of therapeutics including existing drugs and emerging "high-value" biologics and nanomedicines, which will be critically important in new treatments e.g. for lung hypertension, CF and tuberculosis, but are not able to reach the market due to the limitations of existing nebulisation platforms.

The new system will be a low-cost, portable device with increased efficiency of drug delivery. This new technology promises broad societal, economic and health impacts for patients, clinicians and the UK economy.

Although our near-term focus is in drug delivery, we envisage that the technology will provide a generic platform for "smart" droplet generation, with wider potential applications in other important large markets including cosmetics, food formulation and spray-coating.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VITRUE LTD	Enabling non invasive treatment of musculoskeletal pathologies in a new remote healthcare world	£173,264	£138,611
APOS MEDICAL UK LIMITED		£166,930	£133,544

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

This project will combine and build upon cutting edge technical and clinical innovations from a fast growth musculoskeletal health diagnostics startup company and a world leading innovator in non invasive musculoskeletal interventions.

The COVID-19 pandemic has caused immense disruption across industries, none more so than in healthcare. The effects of this change will last long after the outbreak is brought under control. In order to provide healthcare services that meet and exceed the standards of care we were used to before COVID-19 massive leaps in innovation will be required.

This project will help develop new and innovative methods to deliver AposTherapy's world leading non-invasive treatments through cutting edge research in musculoskeletal treatment, computer vision and biomechanics analysis.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SEROXO LIMITED	Development of home blood monitoring test for cancer patients to reduce need for hospital visits	£219,550	£173,444

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The coronavirus pandemic of 2020 has had a huge impact on the lives of millions around the country. A particular challenge has been faced by cancer patients, who have been forced to miss regular checkups and tests over recent months because of their elevated risks of infection (the immune systems of cancer - and especially chemotherapy - patients are often suppressed, making them more vulnerable to infections like COVID-19) and due to the redeployment of healthcare staff to fight the COVID challenge.

Much like the transformation that occurred following the introduction of the home diabetes test, what is needed are new innovative methods of home monitoring of cancer patients (especially those undergoing chemotherapy) to reduce the number of necessary visits to hospital that chemo patients must make, reduce the healthcare burden on the NHS, lower the carbon footprint and make the lives of chemo patients and their families a little bit easier.

Seroxo is addressing this need through redeployment of its proprietary Leukocyte \_ImmunoTest\_(TM) ten-minute, finger-prick blood test into this space and development of an accompanying smartphone App. The key innovations in this project will be in demonstrating the usefulness of the test for monitoring the immune systems of chemotherapy patients and the development of a smartphone app that will monitor and display results over time for use by both clinician and patient.

This will benefit the lives of the over 100,000 patients undergoing chemotherapy each year in the UK, and will benefit healthcare systems by reducing numbers of monitoring checkups, making the provision of world-leading healthcare and support in the UK even more efficient.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADEPTLY AI LTD	Virtual Exhibitions, Events and Conferences	£218,090	£174,472

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Adeptly AI Ltd. is a rapidly growing UK-based SME that specialises in Events and Conferencing. Adeptly was founded by Neil Glenister, Adib Bamieh, and Peter Moore, who harbour the expertise built through careers in serial technology, entrepreneurship, design, technology product development, creative technology. COVID-19 restrictions, financial demand, and environmental factors have all had a significant impact on the event industry. Adeptly plan to develop an isometric digital space that provides a virtual exhibition experience for exhibitors to showcase products, services, and innovations in the same way that they would at a live exhibition or trade show.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRUEINVIVO LIMITED	Pre-clinical testing of glass bead dosimeters and related dose comparison software to enable safer hypofractionation to sustainably and quickly clear the radiotherapy treatment backlog caused by COVID-19.	£230,582	£172,936

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

\*\*The extensive backlog in cancer treatment caused by COVID-19 is well documented. One solution in radiotherapy is to reduce the number of treatment sessions (called fractions) that a patient needs by increasing the strength of the delivered doses in each one, a technique called hypofractionation. For instance, a typical prostate treatment of 30 or 35 fractions could possibly be reduced to perhaps 15 or even 5 fractions .\*\*

\*\*Hypofractionation speeds up patient throughput (therefore reducing the backlog) but higher doses increase the risk of more extensive side effects and the potential of needing additional medical interventions possibly over years. Higher treatment accuracy and measurement is therefore needed.\*\*

\*\*Currently 10 to 25% of radiotherapy patients suffer potentially harmful side-effects or are failed by their treatment, often because there is no ability to measure directly (and with high accuracy) the radiation received in-body, to compare against the planned dose. The TRUEin vivo DOSEmapper technology enables the measurement of the actual radiation at the tumour and surrounding organs, quickly, cheaply and simply so that radiotherapy can be applied more accurately, safely and effectively.\*\*

\*\*The DoseMapper(tm) devices use strings of micro (1mm) glass beads as thermoluminescent dosimeters (TLD), inert, stable, low cost, easy to sterilise, with exceptional radiation dose response and visible on imaging systems for ease of position recognition. Because of these properties and their very small size they are ideal for use as a transient in-body in-vivo dosimeter. With dose levels evaluated in the first of a series of fractions, the clinician can then more informatively decide whether subsequent doses can be safely escalated, alternatively opting to make revisions to the dose delivery plan. The time for readout of a complete 100-bead DoseMapper is around 20\*\* \*\*minutes using our automated DOSEmapper Reader. Accordingly, results from the first fraction can be readily provided to the oncologist, certainly well in advance of subsequent fractions.\*\*

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CLEARVIEW SYSTEMS LIMITED	Clearview Forensic Risk System	£207,002	£165,602

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Clearview Systems Ltd. is a UK SME specialising in financial reporting technology. Clearview was founded by Josie Byrne, Rosie Brennan, Yueping Shen, and Tara Keaveny. Clearview aims to provide a solution that will limit the financial risks UK people and organisations are exposed to. Clearview seeks funding to support a novel, leading-edge technology project that detects fraud and financial weakness. Clearview aims to utilise machine learning to quickly and efficiently analyse millions of accounts filed in online repositories and determine KRI patterns from this data to establish, generate and patent models that predict financial challenges.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NUVVEN LTD	An Innovative AI based end-to-end digital car rental management platform that will reduce contact risk from 500 employees and 10,000 rental customers per year	£205,102	£164,082

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### **\*\*Scope\*\***

### **\*\*Summary\*\***

Nuvven are proposing solutions for key problems among tier two and three car rental operators. High operational inefficiencies, low utilisation of vehicles, a fragmented solution vendor landscape, poor utilisation of data-driven insights, and an inability to grow smaller businesses are just a few of these key problems. COVID-19 has aggravated this predicament (FT, 2020). Car rental operators are desperately looking to digitise their businesses, reduce operational costs, and create capabilities to offer contactless rental services. This will also allow companies to access new consumers who are looking for alternatives to public transport.

### **\*\*Innovation\*\***

Nuvven is the first end-to-end digital car rental management platform that is powered by Telematics and AI to efficiently manage the entire car rental operations, from booking to customer management, fleet maintenance, pricing, reporting, and payments. Building upon their initial MVP and utilising modern design and technology, Nuvven will create a fully digital mobile solution for their customers that will enable safe, no-contact experiences for customers and owners of car rental businesses by equipping them with a mobile app that leverages innovative features, such as keyless entry, biometric customer verification, digital signature, and a fully digitised damage assessment process. Through using the integrated Nuvven platform, car rental operators will also benefit from immediate cost savings, higher fleet utilisation, and revenue maximisation.

### **\*\*Market Opportunity\*\***

None of the existing software providers in the market provide end-to-end digitisation or advanced IoT and AI capabilities to deliver fully contactless rental services, something which Nuvven is enabling for their customers.

The global and UK annual addressable/serviceable markets are £60--65B/£20--25B and £8--10B/£2--3B, respectively (CAGR: 18.5% 2020--2024; IBIS world car-rental report, 2020).

### **\*\*Alignment to Scope\*\***

Nuvven is an SME seeking funding for a sustainable innovation fund project to enhance an existing MVP product, perform customer trials, and obtain user feedback. As per Innovate-UK guidelines, Nuvven plans to utilise this grant to R&D a sustainable and step-change innovation that utilises user experience/design-thinking principles. Nuvven predicts a year-five post-project revenue of £331.1M, with rapid global commercialisation potential, creating 150 UK jobs, regional development, and substantial potential ROI (year-5 post-project revenue/grant received: 352X). COVID-19 has had a direct and critical impact on this industry and the utilisation of public funds will help to substantially benefit and stabilise both this sector and, by generating jobs, respective

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

working communities. Public funding is necessary due to the inherent but mitigatable technological risk of the project.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RFC POWER LIMITED	PCB-FLOW Low cost PCB Flow Battery	£81,611	£65,289
BRAMBLE ENERGY LIMITED		£67,283	£53,826

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The objective of the PCB-Flow project is to reduce the high costs of redox flow batteries, making them more economically viable for use in supporting the integration of increased amounts of variable renewable energy required for the UK to meet its net-zero commitments.

Flow batteries are a promising technology for addressing the unique energy demands created by the transition to a low carbon energy system, but adoption has been hindered to date by their high up-front capital costs. The two largest factors in the cost of a large commercial flow battery system are the electrolyte and the power stack. This project brings together two innovative technologies developed in the UK which directly address those high cost elements with the potential to significantly reduce the overall costs of this long duration energy storage solution.

This project represents the combination of two technologies developed in the UK and could lead to a UK based manufacturing capacity for low cost flow batteries, driving down the cost of long duration energy storage, increasing the flexibility and resilience of the UK's energy systems to crises like those posed by the current COVID-19 pandemic, and ultimately helping the UK meet its decarbonisation and climate change objectives.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BEWARM GROUP LIMITED	Smart Monitoring for Home Heating	£221,236	£174,776
SKYRAD LIMITED		£193,770	£155,016

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

BeWarm and SkyRad are collaborating on a project to build a black-box device and software platform to monitor domestic heating systems, the heart of every home. Our innovative and unique approach aims to provide a self-fit Internet of Things solution that can work universally across heating equipment brands.

BeWarm will install a number of prototype devices, built by Skyrad, into their fleet of domestic heating systems. These devices will provide real-world training data for the Software Platform to analyse using machine learning algorithms. The data will be mined to extract useful and actionable information.

Our goal is to create value and increase productivity by reducing servicing and maintenance costs (currently £2bn per annum in the UK), increasing peace of mind and providing energy (and therefore carbon dioxide) saving advice to the UK's 23.3 million homes.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BIO BLASTER LIMITED	Clean and Track	£217,039	£173,631
DOCTOR ENERGY LTD		£64,606	£51,685
RBC LOGISTICS LIMITED		£57,289	£45,831

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Providing a safe environment for the consumer in a pub, restaurant or hotel is essential especially in the Covid-19 environment.

Viruses have been found to survive on surfaces for up to 3 days. Within hospitality outlets effective cleaning of touch points is essential for customer safety and reassurance. The key issue is that despite having cleaning protocols and procedures in place management has no knowledge as to what cleaning has been done, how frequently and by whom.

Today's hospitality industry is run using sophisticated digital online safety systems. These enable outlets to manage their business efficiently and to keep track of issues within it. These safety systems cover everything from audits and corrective actions that need to be taken, staff training, management of alleged food poisoning incidents, risk assessments, automatic fridge/freezer temperature monitoring, environmental health officer visits and documentation amongst many others. It enables management to get an overview of all safety aspects of their business and any corrective actions that need to be made. However there is currently no measurement of what day to day cleaning has been done.

The rise of consumer rating platforms and the ease of posting reviews on them enable customers to instantly share their experience of venues. These have significant influence on where customers decide to visit. A recent survey showed that 61 per cent would not visit a restaurant with a poor hygiene rating.

The project will develop a Clean+Track system that automatically records cleaning of key touch points within outlets. It will involve the development of a new type of cleaning gun that combines disinfectant and sanitisation functions. Data will be available online and the system will be certified. It will help to build a strong culture of hygiene within the hospitality industry. A door sticker; Clean and Track certified will give consumer's confidence that cleaning within the outlet is at a high level to ensure a safe environment. This will boost footfall .

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EYN LIMITED	Ultrasound-Based Liveness Verification	£174,053	£139,242

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Face aliveness or simply "liveness" detection is a challenging problem during (remote) authentication and identity verification. Such techniques are often used for Know Your Customer (KYC) during opening a bank account, applying for a mortgage, log into HMRC, apply for universal credit, to name a few.

In this context, by liveness detection we refer to the genuine presence of a live human's biometrics such as their face. Liveness detection confirms that such presence is not coming from a replica, that is, a pre-captured photo, a pre-recorded video or a mask. EYN developed a prototype of a novel passive liveness detection system.

Our proposed solution is innovative for three main reasons. First, we conduct liveness detection passively without asking the user to do something and unlike existing "active" approaches it protects the "how" and "when" of the challenge-response that is being done, therefore, limiting the scope of an adversary to counter-attack. Second, the solution does not require any custom hardware, but leverages existing hardware, that is, the camera, loudspeaker and microphone which are available in most portable devices such as a smartphone or a tablet. Third, it is a 100% software-only solution that can be deployed in billions of portable devices available in the market, at scale.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GAS SENSING SOLUTIONS LTD.	Ultra-low power and low-cost pollution and hazardous gas sensors to support the well-being and safety of home workers	£260,976	£174,854
Lancaster University		£111,501	£111,501

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project led by Gas Sensing Solutions (GSS) in partnership with Lancaster University aims to develop and mature the technologies and products necessary to deploy low cost multi-pollution and safety hazard gas sensors with real-time feedback within a domestic environment.

The COVID-19 pandemic has heightened the awareness of our environment. Pollution has a damaging impact on the environment and on our well-being. Pollution causing poor indoor air quality has been linked to many health problems such as lung and heart disease and strokes. Pollutants such as SO<sub>2</sub>, CO and CO<sub>2</sub>, as well as formaldehyde and Benzene are thought to cause lung cancer.

During the COVID-19 crisis, many people have been asked to work from home and this has heightened the awareness of having effective hazardous gas (methane) safety monitoring systems for employees by their employers. Employers need to take substantive and new steps to ensure the homework environment is safe, and productive.

To mitigate these risks, wide deployment of air pollution and safety monitoring systems in the home is highly desirable. These requirements are not met by existing products in the market. To succeed in the domestic market, equipment needs to be capable of low-cost mass production, to monitor multiple pollutants and safety hazards, and to be suitable for battery powered unattended operation.

There are several existing technologies available capable of measuring some or all of these pollutants and safety hazards, but no one is suitable for domestic use due to the cost, size, and power requirements. Products based on gas chromatography and mass spectroscopy are bulky and too expensive, electrochemical sensors are compact but have a limited lifetime, are not capable of simultaneous multi-pollutant sensing and are slow to respond, whilst optical spectroscopy can be compact but is too expensive. Other technologies such as pellistors are effective but consume too much power or have to be replaced regularly.

This project aims to develop a new generation of pollution and safety sensors that are a step change lower cost, more compact, lower power and capable of multi-pollutant monitoring with real-time feedback for use in the domestic environment. This will be achieved through the use of two advanced technologies to be developed and matured in this project: super-bright light emitting diodes (LEDs) and non-dispersive infrared (NDIR) diffusion techniques.

GSS and Lancaster University will use its expertise in manufacturing of LEDs and sensors to deliver the project.

The advanced LEDs will leverage research already done by GSS to create a new generation of low-cost, low-power sensor.

GSS and Lancaster University will utilise their existing molecular beam epitaxy (MBE) facilities in Cumbernauld and Lancaster to design and build this new generation of LED.

GSS has already successfully deployed commercial CO<sub>2</sub> gas sensor using NDIR techniques and will extend the operating wavelength for other pollutant and hazard gas sensing. The development of this new generation of gas sensor will enable wide "fit and forget" deployment in domestic applications.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
POWERED NOW LTD	Digitally enable Micro SME field trade businesses	£207,786	£166,229

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Powered Now Ltd. (Powered) is a rapidly growing UK SME specialising in construction technology. The company was founded by Chris Barling and Benjamin Dyer who are serial entrepreneurs specialising in B2B software applications for SMEs. Micro SMEs in the construction industry are at a significant disadvantage to larger national organisations due to their digital deficit. Large systems cannot be used due to issues of cost, ease of use and suitability; the increasing demand of consumers/homeowners for digital interaction cannot be met by these companies. Powered will develop an innovative system embracing owners, engineers and homeowners enabling all communications to be fully digitised; this includes online appointments, documentation including statutory documents, reminders and notifications.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CODIKOAT LTD	CodiKoat. A novel process for giving frequently contacted surfaces virucidal properties	£175,800	£140,640
B. D. K. INDUSTRIAL PRODUCTS LIMITED		£20,296	£16,237

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 has severely impacted the UK, with social distancing and lockdown severely compromising business activities. The economy cannot afford a second spike in the Covid-19 outbreak but now that lockdown is being eased, businesses and public places are becoming increasingly crowded.

Businesses need to ensure they are Covid-secure to protect their workers and the public who they deal with. The current best way of cleaning surfaces to ensure they do not harbour viruses is by disinfection with chemicals such as bleach. These chemicals are hazardous and environmentally damaging, but Covid-19 means many surfaces are now disinfected multiple times per day.

CodiKoat are developing a novel surface treatment that will enable businesses to stop disinfecting surfaces so frequently. We are combining nanoparticles with a specific surface chemistry that means viruses are destroyed within seconds of contacting the surface. This treatment can be added to self-adhesive films, which means it can be applied quickly and easily to any surface where it is needed. This will reduce the need for near continual surface disinfection, while also protecting people from surface-borne viruses.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CAMPERS SCOTLAND LIMITED	Electric and PHEV campervan development towards zero emissions camping	£217,200	£173,760
The Robert Gordon University		£59,584	£59,584

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Campers Scotland Ltd (CSL) is a pioneer in low-emissions Eco Camper technology. We launched and patented the world's first Hybrid and Tribid Eco Campervan in 2016. Our ongoing research and development, with a range of partners, is driving our pursuit for zero-emissions leisure vehicles. Recognising that fully electric campervans are still not fully viable due to range and independent living power issues, CSL (Eco Campers & CampervanCo.) is developing an exciting range of leisure vehicle designs that deliver the lowest possible emissions while also offering luxury and a range of household comforts such as heating, cooking, lighting and refrigeration from renewable sources. With increased pressure on our rural areas and beauty spots following COVID-19 and the rise of the 'staycation', it is vital that those visiting and staying overnight in such areas, do so with minimum impact on their surroundings, without losing the joy of being on the open road.

The aim of this project is to build on our extensive expertise gained designing and building our award-winning Hybrid and Tribid Campervan range ([www.campervanco.com](http://www.campervanco.com)) towards zero-emissions, all electric Eco Campers with loads of space and comfort that are affordable to many.

CSL is currently designing the next generation of low-emissions Eco Campers using the groundbreaking Ford Transit Customer PHEV. With up to 30 miles purely electric, carbon-free, driving in-town, the new Ford PHEV Eco Camper from CampervanCo will be packed with a host of efficient low-emissions cooking and heating appliances, with revolutionary, lightweight furniture. This cutting-edge camper comes without the worry of restricted drive-range offered by contemporary electric vehicles, but with all the luxury of a top-end camper.

This work builds the stepping stones to the next generation of zero-emissions leisure vehicles and CSL, in partnership with one of the UK's leading renewable energy academic institutions - Robert Gordon University of Aberdeen, puts the UK at the forefront of beautifully designed campers and motorhomes that don't cost the Earth.

With the generous help of Innovate UK's Sustainable Innovation Fund, CSL and its partners are paving the way for the world's first fully electric Eco Campers packed with state-of-the art outdoor technology for a cleaner and guilt-free camping experience anywhere, any time. Eco Campers - Designed with Nature in Mind. Built in the UK.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HYBRID MANUFACTURING TECHNOLOGIES LIMITED	FastWireAM: Fast-track development of a novel compact wire-feed system for Laser Additive Manufacturing	£138,875	£111,100
EPOCH WIRES LIMITED		£188,284	£150,627
TWI LIMITED		£139,747	£139,747

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has caused significant disruption to many markets and has created a need for flexible and adaptable manufacturing methods that can offer significant economic advantages to cope with the disruption. Additive manufacturing (AM) is an obvious candidate that has already seen some industrial success especially in the aerospace, medical and power generation sectors due to its high process efficiency, low material wastage, and the ability to manufacture components or coatings with complex geometries and/or improved material properties.

The compact wire-feed head developed by HMT for wire laser metal deposition (w-LMD), a form of AM, has the potential to supersede both traditional subtractive manufacturing methods as well as current state-of-the-art AM processes. The head is capable of depositing material between 0.5 -- 4+kg/hr and was developed from standard w-LMD side-feed technology. However, its unique design allows for a more stable process with effective-omnidirectional deposition. The head is also very adaptable due to its compact size, where its laser - blown powder variant is globally leading in its design for ease of integration into machine tools through automated tool change system.

This project will develop and deploy an innovative approach for wire delivery in LMD to prove the commercial viability in a number of different industrial sectors. This will be achieved by applying the technology to a number of real-world industrial components to demonstrate added-value and market potential within the UK.

The key outputs from \_FastWireAM\_ are:

- 1\. **Demonstration of added-value** provided by the w-LMD head, including reduced production time and material waste, accelerating **market uptake** in a number of diverse sectors and applications to provide additional revenue streams for the partners.
- 2\. **Improved hardware and process** through performance mapping and parameter optimisation, ensuring a robust and reliable manufacturing method and quality required by industry.

The successful completion of this project will demonstrate and establish the commercial viability of this process. We expect that the technology will be offered as a manufacturing solution to both current and new customers and revenue streams, and retrofitted onto new and existing machine tools.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
UNICARD LIMITED	Unicard Smart Mobility: Covid recovery for the transport sector through micromobility data	£255,819	£173,957

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project is to develop and launch "Unicard Smart Mobility". It is an open transport data collection and visualisation platform and set of standards, designed to help Local Authorities (LA) adapt to the rapidly changing landscape of mobility in their cities. The need to develop more sustainable transport options to replace private cars has led to an explosion in "micromobility" providers -- like dockless bikes, e-Scooters, demand responsive transport and Electric Vehicle rentals. Covid-19 means this is now imperative, as many passengers are avoiding "traditional" forms of public transport like buses or trains where social distancing is harder to achieve, favouring instead individual, outdoor modes of transport like bikes and e-Scooters in particular.

However, introducing new forms of transport into an existing cityscape is complicated, and requires a delicate balance of policy making to ensure it does not cause more problems than it fixes. Using data to improve visibility of issues like increased traffic congestion, risks to pedestrian safety, street clutter, and a lack of affordable access is a key learning from other global cities who are further ahead of the UK in this area.

Our product is designed to solve these problems through the use of big data. It acts as a centralised hub to collect and store large amounts of real-time trip and asset (bikes, scooters etc.) data from a wide variety of private operators. The aggregated data can be accessed through our web-based visualisation tools, offering powerful historical reporting and policymaking data, as well as a real-time monitoring system that helps to ensure compliance with bike and scooter parking regulations or operating areas. Alternatively, the aggregated data is available for bulk export for use in other business intelligence and reporting tools, or for direct use inside customer-facing apps to show available transport options.

Use of our platform also promotes general innovation in the mobility marketplace, by making it simple to track data and gauge effectiveness when piloting new types of transport in a city.

As both passengers and government rush to increase use of new, untested forms of outdoor transport post-Covid, we see this as a vitally important opportunity to use data to ensure that the systems put in place work for everyone.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INOVA DESIGN SOLUTIONS LTD	Bodytrak: early-detection of infectious diseases in industrial and front-line workers	£215,959	£172,767

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Heat stress is a major issue for industrial workers operating in warm climates and/or wearing protective clothing (PPE). Economic costs due to heat illness are £504 on average per worker annually. At Inova, we developed Bodytrak(r), an innovative remote monitoring system used to acquire vital signs in real-time. From a small in-ear device, core body temperature and heart rate are continuously measured and transmitted to the Bodytrak cloud platform to display vital signs/alerts on a real-time dashboard.

Covid-19 was declared a pandemic in March 2020 by WHO. The impact to industrial organisations, such as production plants, refineries, logistics and constructions firms has been a reduction in revenue due to economic slowdown, but also a reduction in productivity output due to cases of Covid-19 and the requirement for social distancing requiring fewer workers on site. Employers have to balance worker welfare with reducing economic impact and have been investing in technology which claims to provide early detection of Covid-19, e.g. thermal cameras, but MHRA reported that these products are not reliable since they measure skin temperature not CBT. Further, temperature alone is not adequate in providing a reliable assessment.

This proposal seeks to expand the functionality of the Bodytrak in-ear solution to measure additional vital signs to automatically detect Covid-19 (and other infectious diseases), particularly for industrial and front-line workers who would wear the device routinely. The addressable market currently represents £8.35Bn globally (£476m UK) (2019), with growth rate 10-42%, and serviceable market £135m.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RHEENERGISE LIMITED	High Density Hydro [HDHydro] R&D developing new IP	£174,833	£139,866

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The project is designed to rebuild and catch-up the companies R&D activities, following C-19. To grow the business creating jobs across engineering, manufacturing, construction. RheEnergise offers an opportunity for significant UK exports (licenced revenues and manufacture equipment).

High-Density-Hydro [HDHydro]: An electro-mechanical energy-storage solution that builds upon traditional pumped-hydro. Traditional pumped-hydro provides levelised costs of energy-storage significantly below (<50% lower) competing energy-storage technologies [batteries]. However projects take decades to complete. Traditional pumped-hydro uses low-cost electricity to pump huge volumes of water up mountains into a reservoir. As prices rise the water is released through turbines regenerating electricity to the national-grid. Projects need huge water volumes, mountains [often remote/ protected areas] and large-scale grid infrastructure, creating social and environmental concerns.

HDHydro is different. RheEnergise has developed a new high-density, low-viscosity, environmentally-benign fluid (Rhe1809) with 2.5x the density of water. This means (if everything else stayed the same) RheEnergise projects provide 2.5x the power [MW] or 2.5x the energy [MWh] compared to water. It means projects are smaller (2.5x smaller volumetrically), built on low hills (2.5x lower) rather than mountains, connected to the existing distribution grid. As traditional pumped-hydro projects costs are ~65% civil engineering costs, a 60% saving in construction volumes is significant. Projects are physically similar in size as competing flexibility technologies (batteries, gas-peaking) and can be consented/ constructed in a similar 24-30 months. Lastly, levelised costs are comparable with traditional pumped-hydro (50% below batteries).

This project is an R&D catch-up project investigating those areas that have been adversely affected by C-19. Five R&D areas:

- 1\ Fully characterise the environmentally benign high-density low-viscosity fluids rheology
- 2\ To optimise reversible-pump-turbine mechanical efficiency for the fluid
- 3\ To build a physical test-rig for seals design and seal arrangements for the fluid
- 4\ Physical Wear/ Abrasion tests to help system and sub-system specification
- 5: A supply and logistics study (costs and environmental) for the fluid raw materials.

Energy-storage projects commercial viability depend on several factors that inform levelised-costs: Capital-cost; Operational-costs; Round-trip efficiencies. This project addresses and improves upon each and in addition seeks to better understand Rheenergise's supply chain environmental footprint.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CHARMSTAR CAMBRIDGE LIMITED	CoERCe III Polymer Particle Beads (PPBs) Scale-Up Experimental Development	£162,045	£129,636

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project will research and develop a scale-up batch production process for a novel polymer based CO<sub>2</sub> capture and removal porous particle beads (PPBs) sorbent, ready for field testing of the technology. The PPBs are used to remove targeted gas contaminants such as CO<sub>2</sub>. The project builds on a successful Combined Energy Recovery and Carbon dioxide Capture (CoERCe) technology research programme that led to successful completion of mobile laboratory bench-scale demonstrator, and independent laboratory performance verification tests using commercial grade chemicals. The CoERCe technology is now at Technology Readiness Level 6 (TRL-6).

To reach technology system prototype demonstration in operational environment level TRL 7 (field trial), the CoERCe project requires several kilograms of PPBs material to be produced and tested in the field. The work will involve: (i) PPBs material batch scale-up production process research to produce CEAD's patented solid CO<sub>2</sub> sorbent material known as Molecularly Imprinted Polymers (MIPs), which are fundamentally Porous Polymer Beads engineered to deliver specific CO<sub>2</sub> capture characteristics; (ii) the development of field trial test programme to verify the CoERCe technology in-situ, and (iii) manufacture of a minimum 10kg of PPBs material using scale-up process. Compared to existing CO<sub>2</sub> capture solutions, the advantages of MIPs lie in their low material and production costs, low absorption and regeneration temperatures or pressure, as well as high CO<sub>2</sub> gas selectivity in any gas mixture.

CEAD will carry out this project on its own over a period of 7 months, assisted by specialist polymerisation process subcontract consultancy help from the University of Cambridge. Initial target markets for CoERCe technology is biogas upgrading, hydrogen purification, biomass plants, with long term applications in gas powered electricity power stations, freight transport, and open fires and stoves in developing countries.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DATA PROOF OPERATIONS EP LTD	Blockchain-enabled Immutable and Unhackable Database for Court-ready Evidence and Proof Certificates.	£164,617	£131,694

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Existing databases are susceptible to cyberattacks, and can be easily hacked or changed. They are not a good source of proof. They are also built using outdated legacy technologies, database design methodology which was designed over a decade ago. These technologies were not designed to withstand modern hacking methods and not designed to deliver on today's increasingly stringent data regulations where being able to prove events is essential. Data proof is a rapidly growing UK-based SME that was founded by Adrian Clarke and Matthew Roden. Data proof aims to solve this security need with a proof of concept of an encrypted distributed ledger blockchain database. A database that will enhance global data security, deliver real data compliance and data proof in the form of immutable proof certificates. The project is projected to generate a year-5 post-project revenue of £40+M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STORACALL TECHNOLOGY LIMITED	Phone Contact Application for Patients on Smartphones	£207,993	£155,995

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 has resulted in a doubling of telephone triage calls made from GPs to patients, replacing face to face appointments and the trend is set to continue.

X-on is a leading provider of cloud telephony in General Practice with products that increase efficiency of communication between patients and GPs working in the practice or from home. Surgery Connect and GP@Home integrate closely with EMIS Web and SystemOne clinical systems.

The project will develop, pilot and take to market a smartphone softphone app that will replace traditional telephone calls to a growing proportion of patients across all of General Practice and provide a substantial cost saving to the NHS. The app will plug into existing patient apps to extend patient access, both practice originating and patient originating.

Close integration with a variety of clinical systems, a high level of integrated security, an omnichannel approach and fallback to the PSTN make this a unique development with a rapid route to market and immediate payback. The innovation complements the Digital Strategy of the NHS, accelerated in response to Covid-19 whilst minimising digital exclusion by retaining traditional communication channels.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NUM TECHNOLOGY LTD	Open standard for call routing, caller ID and call centre offloading	£213,487	£170,790

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The R&D in this project will develop a telecommunications standard that will enable:

- \* More flexible call routing systems, giving organisations more flexibility to route calls through VOIP for homeworkers
- \* Global caller name ID -- showing the name of the caller, not just the number
- \* Calls to call centres can be offloaded to online resources (e.g. websites, videos, AI assistants) -- assisting callers and answering their questions quickly and more efficiently.

The standard will create an online presence for every telephone number, enabling for the first time the storage and retrieval of public, structured, machine readable data about any telephone number worldwide. This will make it possible for callers to navigate call centres using on-screen options and easier for organisations to provide answers to caller questions without connecting them to a call centre operative.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VENTIVE LTD	Mass-produced Energy Pod for Mass Retrofitting	£171,851	£137,481
HADLEY INDUSTRIES HOLDINGS LIMITED		£143,496	£114,797
Manufacturing Technology Centre		£149,667	£149,667
MIDLANDS HIGH GROWTH LIMITED		£34,728	£27,782

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The project focuses on Design for Manufacture, design of assembly and production process, Value Optimisation and development manufacturing capacity for the Ventive EnergyPod, a connected, fully integrated and plug-and-play ventilation, heating and hot water system combining proprietary intelligent ventilation with heat recovery and innovative hybrid heat pump technology, designed for both new dwellings and low energy 'deep' retrofits. In aggregate the systems will form a network of load shifting devices using thermal capacity of the hot water storage and the inertia of each home to shift peak energy use when needed. Since each home is distinctly different (including size, heat loss, thermal mass, occupancy density and patterns, user behaviour and other factors) the EnergyPod will use an array of integrated sensors to continuously assess the indoor environment and adapt the performance of each system learning and optimising it's operation as well as using nudge techniques and user interaction to drive improvements in energy efficiency and load shifting capacity (some users may 'bet' more comfort for financial or other rewards for example).

Ventive and the project partners aim to become an effective link between the building intelligence, building services and building fabric, optimising each home individually and, in aggregate, using homes as virtual power stations, increasing or decreasing their Grid footprint as needed for effective frequency response while monetising the significant energy savings from EnergyPod system (up to 75% from both demand optimisation and off-peaking the time of energy conversion) powering the innovative retrofit financing business model.

Project partners have a strong backing from potential clients including Engie, Melius homes, Nottingham City Homes, One Manchester, Sutton Housing Partnership and others to deliver the EnergyPod solution in large numbers at the right cost. This project is designed to facilitate that.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ANYONE TECHNOLOGIES LIMITED	A revolutionary voice application that could reduce the time spent to search for complex information by 91% while providing 51,000 people additional income.	£257,959	£172,833

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Anyone Technologies Limited (Anyone) is a rapidly developing UK-based SME that was founded by Alfred Malmros, Samuel Ducker, and David Orlic. Currently, voice assistants such as Alexa and Google Assistant use data from sources like Google and Wikipedia to provide instant answers to simple queries. However, when a question is more complex, or contextual, or phrased in a certain way, voice assistants are not as effective (McClellan & Frimpong, 2019). Anyone is a voice platform that utilises the latest academic findings in conversation design (Pangaro, 2019) to access previously untapped human knowledge, and merges it with an advanced machine learning model to distribute that knowledge on-demand, and at scale.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SENSIBLE DEVELOPMENT LIMITED	Online coffee marketplace with auctions to increase revenues for coffee farmers and provide more diversity for customers	£150,710	£120,568

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Sensible Development Ltd. is a rapidly growing UK-based SME specialising in the coffee marketplace. The project has been created by Alan Newman, the company founder, and Rachel Goode, whose combined experience is as an entrepreneur, business owner, software engineer and product & delivery manager. Unsustainable coffee prices mean that coffee farmers worldwide struggle to generate a sustainable income. Sensible has identified a need for an alternative route to market for coffee farmers that will expand the number of buyers and increase sale prices, ultimately, increasing their revenue. Sensible aims to address this need by producing an online marketplace to facilitate direct trade between coffee farmers and buyers.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TOPOLYTICS LTD	Improving resilience and resource efficiency in the waste system post Covid	£216,710	£173,368

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The waste system is complex, inefficient, opaque and is not data driven - an acknowledged problem globally. Reflecting this, on a global basis, more than 70% of the world's waste currently ends up in a landfill, waste dump or is lost to the environment. Consequently, there is a need for better data on waste to improve the outcomes for this material. Topolytics' WasteMap(r) platform - addresses this challenge by ingesting, cleansing and analysing waste data at scale, generating trusted insights for waste producers, recyclers, investors and regulators. In essence we are using mapping and data science to make the world's waste more visible, so that the data is verifiable, and we can then generate insights that unlock value in the material for all players in this 'downstream' supply chain.

Topolytics is scaling to meet this major environmental and social challenge and realise the associated global commercial opportunity. It seeks support to further develop WasteMap(r) to enable the company to accelerate to commercial deployment, at scale, globally. By applying its innovative, data-driven approach to the management of materials -- WasteMap(r) has the potential to become a smart grid for the world's waste.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CORE BLUE LIMITED	CreatED: A revolutionary cloud recording suite to create and distribute online interactive lessons from any device, to any device.	£205,415	£164,332
LB PARSONS LIMITED		£114,052	£91,242

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

CreatED is a cutting-edge cloud video suite that enables educators to use existing teaching assets (PowerPoint for instance) to easily create, record and share interactive lessons with no downloads or additional tools.

The huge growth of online-first educators has clearly demonstrated market demand for online education; students enjoy the convenience of self-paced video lessons. The bottleneck within traditional education institutions is not user demand for online learning (distance learning is increasingly popular) but rather the production of online content. Traditional educators may be less comfortable using the range of technology, software and tools required to record, edit and publish online educational content; and likely do not have the time in any case.

Although education is increasingly delivered online, it is widely accepted that EdTech uptake has been slower than anticipated. Educators are time-poor and do not want to learn to use new "risky" tools which disrupt their workflow. Covid-19 has expedited EdTech uptake though, particularly within traditional educational settings such as schools and universities; the value is now being realised. CreatED will focus on the R&D of tools which assist educators to deliver traditional educational content, in a way educators are comfortable with, through a new medium.

CreatED is an integrated tool which enables educators and institutions to work effectively by producing a single set of resources which can be delivered either 1-2-1 live or remotely online without the need to install and learn any new software. This is particularly timely for schools who are soon planning to return to 1-2-1 teaching, but with an uncertain outlook for future lockdown state they need the ability to respond to new conditions and restrictions quickly without the high workloads (and paper waste) associated with creating home learning packs:

- \* Cloud-hosted: no software installs required (work devices often "locked" for security).
- \* Live collaborate: multiple presenters can collaborate on the interactive whiteboard & record lessons remotely.
- \* Use Existing Assets: proprietary processing services will interpret a range of formats (PowerPoint, Google Slides etc.) and create a series of "presentable" interactive whiteboards; educators can utilise existing content.

Device Support: unlike other tools, the recording suite and lessons are accessible on a wide range of devices (mobile,tablet,desktop).

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CUSTOMATE LTD	An innovative digital escrow platform to provide buyers and sellers with security and flexibility when making transactions that could save SMEs 200 hours and £9,000 annually.	£204,978	£163,982

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Customate Ltd. is a rapidly growing UK SME specialising in RegTech & FinTech.

COVID-19 has accelerated the move online, with SMEs needing to offer cashless transactions and provide a safe trading presence that suits their business and customers. There has been a surge in demand for platforms that can handle volume and complexity.

Founded by Usman Awan, Bruce Stewart and Alison Werrett, Customate are developing digital escrow platform, providing buyers and sellers with security and flexibility when making transactions. This enables both parties to trade with confidence and eliminates any chances of fraud.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SENTAI AI LTD	Sentai - Sustainable innovation to help the elderly live a more independent life for longer	£220,150	£173,918

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Our mission is to transform the lives of millions of elderly people to help them live a more independent life for longer. Today, nursing and care homes are not a viable option for many because of the heightened threat of COVID-19\.

Informal care in the home setting is still very expensive, time consuming and stressful meaning that the elderly person loses independence and their caregiver must make significant sacrifices or caregiving is outsourced at great cost and loss of personal connection.

Nursing home style services and products in the home are very expensive and the technology lags, focusing on just alerts and monitoring.

Currently, there is no adoption of advanced technologies to help automate and speed up decision-making, whilst improving the welfare of the elderly to help prevent loneliness and the onset of mental and physical health issues.

Sentai's goals are to provide non-invasive monitoring and companionship by using predictive intelligence that lives in in the home of those who need to be cared for. Sentai will provide a personalised service dealing with the day-to-day tasks that can easily self-escalate to deal with emergencies, all whilst keeping the elderly person socially connected to their loved ones and community.

The highlighting of concerns over loneliness, and the heightened risk of COVID-19 transmission in the care home setting, have led to our desire to accelerate development of this product and to provide faster access for elderly people to the benefits of this technology increasing and extending their independence. At the same time, we will be helping to save millions in lost work time for carers and help to make every carer visit valuable one.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BERYTUS LTD	Development of a 3D photoreal asset generating engine, viable for consumer-grade electronics thus transforming e-commerce market sector	£181,374	£145,099

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Photoreal and interactive 3D assets are used across many fast-expanding markets including e-commerce, architecture, movies and video gaming. COVID hit retailers have told us they are looking at the vital issue of 3D representation right now and are frustrated with their findings. In several applications, it provides enhanced user-engagement and increased consumer retention compared to 2D images or video, though as sub-optimal for consumers, current State of the Art solutions are not widespread in adoption by retailers.

Photoreal interactive visuals are generated through a process called "real-time 3D rendering", enabling complex and interactive experiences to be visualized through dedicated software and hardware on standard consumer PCs or mobile devices.

Berytus is developing a unique real-time rendering technology that operates differently to the current state of the art solutions.

The main objective of this up to 9 month industrial-research project is to enable optimization and beta-testing of Berytus real-time rendering solution. This builds upon the expertise and know-how within Berytus associated with the generation of 3D assets and development of rendering software. The technology will be developed and tested in-house prior to end-user trials, demonstrating the ability to generate high-quality 3D photorealism on all devices.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SHOAL COMMUNITY LTD	Phased return to the office: enabling employers to safely return staff to offices through further development of an existing easy-to-use (demand-driven) technology platform	£206,804	£165,443

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID-19 has had a huge impact on every aspect of our lives. For many, the rapid lockdown marked the first time that they worked from home consistently, having being forced to set up at home in a hurry, often with limited resources and competing for space with household members.

As a result, workers have reported issues with everything from new physical pains (from unsuitable working conditions) to mental health issues associated with loneliness. Working from home over such long periods can have a negative impact on work-life balance, particularly among working parents who have to look after children during the day, often working late into the evening. This can negatively impact people's lives and wellbeing.

Ultimately, workers will need to return to offices but managing a phased return to work at scale poses a hugely complex challenge for large companies who currently have no way of easily managing the number of staff in their buildings or allocating staff to specific areas, as they will need to in order to comply with social distancing protocols.

Our Phased Return to Work solution will develop new functionality within an existing UK-wide platform to enable employers to manage who can access offices (and for how long), see where staff are working, measure occupancy, and track staff wellbeing data. The project will therefore enable companies to easily manage building occupancy, while employees are reassured that they will not be entering an overcrowded workspace.

If a member of staff does become infected with COVID-19, the system of zoning areas in combination with desk bookings means that it will be easy to track and inform colleagues who came into contact with that member of staff. Instead of having to shut down the entire building and ask all staff to work from home again (as we saw in offices where there were outbreaks before the lockdown), the zones and other areas they had access to can be deep-cleaned and only those staff who came into contact with them will have to isolate. In addition, this system of zoning means that entire workforces or teams are far less likely to all become ill at the same time: even if an infection spreads through one zone, the spread is limited to that area.

However, the success of this software also has a much larger impact on employees' health. Enabling staff to return to the office in a safe way has potential to dramatically improve mental health and wellbeing. Not only do staff have the reassurance that all precautions are being taken, they can come into work safe in the knowledge that the building will not be overcrowded and that they will have a desk to work at.

Ultimately, the Phased Return to Work solution will help companies and employees return to some form of normality without compromising on employee mental or physical health.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPEN BIONICS LTD	Digital clinical pathway for upper limb prosthetics and rehabilitation	£218,397	£174,718

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Open Bionics seeks to develop remote care and rehabilitation for amputees who cannot access their clinics and clinicians due to lockdowns in multiple served markets including the UK where some clinics are still yet to reopen.

Open Bionics will create a digital pathway that enables clinicians to work with patients and deliver bespoke prosthetics to all upper limb patients with a variety of limb differences and across a diverse age range (7 - 90 years old). Open Bionics will also test the company being solely responsible for the entire clinical pathway by hiring a clinical team. This will validate whether a B2C business model is possible. The benefits of Open Bionics controlling the clinical experience include better patient care, better training for patients, remote service, and massively reduced costs.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DIODE GROUP LIMITED	Electric vehicle suitability and infrastructure procurement software	£182,227	£145,782

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 has had a profound effect on businesses of all shapes and sizes. One of the main ones being the financial impact. Now, more than ever, businesses need to become leaner, greener and make their money work harder for them.

The adoption of zero emission vehicles for businesses is both one of the most environmentally impactful and financially beneficial transitions businesses can make. This transition offers the potential to greatly reduce a company's carbon footprint, and reduce operational cost by up to 70% in one activity.

A huge part of this undertaking is ensuring the right vehicles are transitioned at the right time, accompanied by the right level of infrastructure.

Our project is designed to make electric vehicle infrastructure easy to implement for businesses and individuals.

We are developing a branded or white labelled software interface for vehicle providers' customers, such as businesses and individuals, to assess their electric vehicle suitability, profile their energy consumption, identify their charging infrastructure requirements and procure this infrastructure from multiple providers.

We will use a data-centric approach to assess businesses, their employees' and their fleets' suitability to switch to electric. From this we will evaluate the right level of charging infrastructure needed at each business site, as well as employee homes, and when this infrastructure will be required. This crucial step ensures that longevity and future requirements are considered from the very start.

Using a number of innovative technologies we will streamline the process of surveying and quoting these opportunities, improving margins and decreasing time requirements for the partners involved.

The benefits include:

- \* A streamlined and standardised single interface for all businesses and individuals.
- \* A significant potential environmental impact by reducing the number of physical surveys required.
- \* A positive impact financially for installation partners, significantly reducing their cost to survey and to quote. Both of which dramatically decrease the time required to quote.
- \* Increased throughput of quotes, increasing the opportunity potential for installers and their overall margin.

Once quotations are generated, we will highlight our recommendation to the customer taking into account all of the data points collected. Our modular quotation system will allow customers to edit the order without the need to re-quote, and view a live Return-On-Investment and the environmental impact alongside.

Using feedback from our strategic partners, such as automotive leasing companies, dealerships, manufacturers and energy companies, we have identified that Diode can create a unique proposition for them by offering one point of interface for all charging requirements across multiple brands. As a result, we are

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

also building the system to handle and guide their personal customers through the process of purchasing the right infrastructure.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PAY DASHBOARD LIMITED	Moneysmart: A Revolutionary Financial Wellness Platform Utilising Machine Learning that Could Save Customers On Average £250 per year and Generate a Year 5 Post-Project Revenue of £22.2M	£208,839	£167,071

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Pay Dashboard Limited (PayDashboard) is a fintech SME that has developed a new product called Moneysmart, created by James Bradley, Luke Hopton, and Mike Binns. PayDashboard is solving a substantial unmet need that could save customers over £250 every year with the development of their MoneySmart platform. MoneySmart is an intelligent financial wellness platform that uses intelligent questioning, access to API data fields, user profiling, and machine learning to match an individual's needs to Fintech products that meet their requirements, connecting genuine consumer leads and suppliers in a simple, easy-to-use portal.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DIGITAL STAFF SOLUTIONS LTD	Florence Bank Tool	£141,155	£112,924

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The social care sector has been especially hard-hit by the recent Covid-19 pandemic with nearly four in ten care homes reporting outbreaks. This has exacerbated the issue of temporary staffing in the social care sector with 25% of care workers having to self isolate during the peak weeks of the crisis. To reduce the spread of the virus homes are now looking to reduce the use of agency workers and minimise the movement of staff between locations

However, use of agency staff workers is not an issue that will go away as the pandemic eases. Pre-pandemic care homes were three times more likely to rely on staff supplied by agencies than other parts of the labour market. These staff cost the care sector typically 30% more than using a member of bank staff. Given that 80% of social care expenditure is on the workforce, agency usage comes at a huge cost to the sector.

To address these challenges, Florence is applying for funding to develop a tool designed to support the social care sector in filling their rota gaps effectively with internal and bank staff through the COVID-19 crisis and beyond. This will enable social care providers to significantly reduce their costs. But more importantly will have significant benefits for their residents who will receive greater continuity of care.

The system will incorporate features designed specifically to meet the needs of social care, such as:

- \* Management of bank staff compliance requirements to meet the Care Quality Commission (or equivalent) standards at scale;
- \* SMS and Whatsapp based functionality to fit with existing technologies used;
- \* Multi-site support for large scale care providers to manage internal and bank staff at scale (including restricting staff to one site where appropriate to minimise infection risk);
- \* In-app messaging between providers and their internal staff and bank staff to increase efficiency and speed of filling shift gaps.

Furthermore, this project will allow the development of cutting-edge features which do not exist in any other solution today, but which are critical in today's environment:

- \* Validation of Covid-19 status of the social care provider and its users;
- \* Validation of Covid-19 antibody status of volunteers (if this becomes best practice).

The social care sector has struggled with staffing needs for nurses and carers for many years. This will be exacerbated in future due to the visa restrictions imposed since Brexit. While the current pressure may ease after the immediate pressures of Covid-19, the need for more solutions to support this vital sector efficiently and cost-effectively will remain for the long term.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SHELTON MACHINES LIMITED	Automated commissioning, set-up and operation of a novel fabric inspection system delivering objective quality control and a fully remote customer journey	£210,484	£168,387
CTEX NTX LIMITED		£76,067	£60,854

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Textiles and garment supply chains are enduring disruption due to the Covid-19 crises. Retailers have not been able to sell products through their bricks and mortar outlets. Supply chains are complex and globally dispersed. Production orders within the supply chains have been cancelled or curtailed, many of the geographic regions have not been able to offer government support for their factories. Manufacturing and Retail have been ranked by Statista as the 1st and 3rd most impacted sectors by Covid-19 in 2020 [Statista-June-24th-2020]. Our ecosystem combines both these sectors.

Retail Brands create and control the supply chains. The dominant supply chain drivers are digitisation and sustainability. Retail Brands constantly visit their supply chain factories to monitor compliance, quality, delivery schedules, digitisation progress and sustainability processes. Digitisation enables remote monitoring, significantly decreasing their costs and travel carbon footprint. However the sector remains very traditional and labour intensive, so there has been resistance to change. Covid-19 is a catalyst for change, digitisation is accelerating rapidly.

The second change driver is environmental sustainability. Most the supply chains are far from the end consumers meaning they are relatively out of sight. Societal awareness and pressure has been limited, however this is changing. Sustainability is now key for all retail brands.

Quality Control (termed fabric inspection within the supply chain) is a key factor not only for digitisation, but also decreasing waste (sustainability) and improving yields (sustainability). Traditionally quality control has been very labour intensive and executed inconsistently (subjectively).

c-tex and Shelton are global leaders in automated inline colour variation monitoring and defect detection. These are the core functions of fabric inspection. Since 2014 our technologies have been gaining traction among the pioneering textile producers and garment factories, enabling them to automate (digitise) fabric inspection. The sector technical leadership of both companies has already been furthered by InnovateUK to develop their technologies for automated quality checking of patterned fabrics in addition to solid colour fabrics. Therefore factories can now use c-tex and Shelton to digitally quality check their solid colour and patterned fabric. This technological offering is unique to c-tex and Shelton.

However due to Covid-19 we now need to automate (digitise) our business model (customer journey). We have had a traditional business model of a face-to-face sales process and long duration onsite user on-boarding (installation, commissioning, training). We now need a non-travel automated customer journey so that our automated technology can be purchased, implemented and used.

For our new customer journey we will use readily available remote working technologies where applicable, but we need to develop our proprietary technologies to enable remote installation, commissioning and machine learning. Key to this is to accelerate our AI capabilities for machine learning and self-commissioning of our sensor technologies. We recently started to collaborate at leadership level but we now need to move this onto collaboration between our technical teams. The development of a single interface combining both our technologies is also essential for our new customer journey.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BLOCK DOX LIMITED	PREMISENS - Occupancy & Air Quality Sensing in Shared PREMISEs for ENergy saving and Sustainability	£174,720	£139,776
PLEXAL (CITY) LIMITED		£132,540	£106,032

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

COVID has affected confidence regarding the safety of workplaces, but there is an economic drive to get people back to work, and with shared workspaces (eg meeting rooms, desk-space) being used by 73% of UK workers (Savills, 2019) there is a need to ensure and demonstrate the safety of shared indoor workplaces. In addition, meeting rooms and offices are often controlled centrally by a building management system that doesn't respond to live data such as air quality, occupancy and utilisation, meaning that energy is expended unnecessarily to heat and cool unused spaces.

Shared areas, such as meeting rooms, and offices are highly vulnerable to the trifecta of health and economic threats of airborne infectious disease transmission(eg COVID-19, SARS, MERS and future pandemics), social distancing, and rapidly changing occupant space utilisation/density requirements. Airborne illnesses caused by viruses (such as COVID-19), bacteria and fungal spores can propagate where indoor ventilation is inadequate, significantly increasing exposure to outbreaks.

Most shared workspaces and co-working spaces do not have any combined occupancy or indoor air quality (IAQ) analytics, and so are blind to the critical real-time information needed

to manage these threats. In addition, due to the lack of real-time occupancy and air quality data, co-working spaces are unable to enact energy saving measures that could otherwise be put in place when communal areas and offices are unoccupied or have low occupancy levels.

Current methods are inadequate for several reasons including significant inaccuracy, intrusiveness and lack of interoperability.

The risks and benefits are known. Studies evidence 15% death rate increase from COVID-19 patients previously exposed to air pollution (damaging heart/lungs) and from just 1 microgram increase in PM2.5, and 16% of flu transmission originating in offices. Whereas, better managing shared workspaces from improved occupancy and air quality intelligence not only safeguards health/wellbeing but increases performance and productivity by up to 34%, reduces operational costs and increases energy saving by up to 56%.

**\*\*PREMISENS\*\*** is a disruptive and innovative game-changer that addresses an urgent unmet need to provide an intelligent sensor-AI solution incorporating localised real-time occupancy, energy consumption data, and IAQ intelligence for shared workspace owners, managers and tenants with long-term potential for improving operational efficiency, energy saving and revenue generation.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SIMPLY VIDEO LTD	World-first communication platform that opens up new capabilities in video conferencing to connect with AR and VR devices	£340,801	£173,809

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Simply Video (Simply) is a rapidly developing UK-based SME that was founded by George Sims, Chris Dinsdale, and Alex Deighton. Currently, traditional 2D video conferencing platforms and augmented and virtual reality platforms do not support cross-communications. This slows down users' ability to communicate, resolve issues, or design and sell large or complex items. Simply is creating a world's first communication platform that opens up new capabilities in the video conferencing sector. This solution is projected to deliver workforce enablement and training efficiencies that are 33% more than the offerings of traditional video conferencing platforms. Thus, Simply's innovative video platform enables communication in new worlds.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MIDLANDS HIGH GROWTH LIMITED	DOORWAY - Roof and External Wall Insulation Cassettes	£79,913	£63,930
HADLEY INDUSTRIES HOLDINGS LIMITED		£80,142	£64,114
ICOPAL LIMITED		£79,833	£63,866
Manufacturing Technology Centre		£85,001	£85,001
QM SYSTEMS LIMITED		£49,936	£39,949
TIN SMART SOCIAL LIMITED		£49,784	£39,827
WEST ROGERS LIMITED		£24,964	£19,971

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Most people think of fuel poverty as simply not being able to afford to keep your home warm. The official definition is; a household is said to be fuel poor if it has above-average energy costs, and if paying those costs would push it below the poverty line as far as its remaining income was concerned.

One of the key factors that can contribute to fuel poverty is that the poor energy efficiency of the property (and therefore, the energy required to heat and power the home). This can be due to a lack of insulation (walls and roofs), draughts, poor ventilation, dampness or inefficient heating systems.

Local Authorities in the South East of England generally have below average fuel poverty levels, while households in the North West, London and the West Midlands generally have the highest levels of fuel poverty. (Department for Business Energy & Industrial Strategy -- Fuel Poverty Supplementary Tables 2020) The West Midlands elected mayor has an ambition to aggregate local authority social housing stock to tackle 50,000 homes by 2024.

DOORWAY is part of an innovative social house retrofit program that tackles both Fuel Poverty and emissions without the need for government subsidy. This is achieved by a proportion of the energy savings achieved paying off the capital costs, regenerating some of Britain's most deprived areas, all funded by global green social finance to 'Build Back Better'.

To ensure a creation of a new supply chain to meet this challenge Midlands High Growth has its own Exemplar factory and Skills Village ensuring other manufacturers can license their own DOORWAY automation lines or 'pop up factory' with full turn key support to create UK high value jobs,

DOORWAY is a key breakthrough combination of products, attractive to owner/occupiers/private and social landlords, reducing fuel poverty whilst driving widespread new designed for 'COVID' safe employment opportunities aiding both economic recovery and reducing any future pandemic.

Each house will have a 'building passport' created that ensures the DOORWAY solution will be compatible with other retrofit technologies to ensure that Net Zero carbon emissions can be reached by 2040.

One of the major challenges with a deep house retrofit is the length of time an occupant may have to vacate the property whilst the roof is taken off and replaced or while the walls are being re-bricked.

The DOORWAY system will significantly reduce the disruption to the occupant with the roof being in place and water-tight within the same day and the walls lifted into place within two days. At the same time this also reduces the number of vans and lorries needed to attend site and the amount of rubbish that inevitably traditional methods create.

DOORWAY will create highly efficient insulated and easy to install a Roof and an External Wall Insulations system that can be produced in volume off site, within a high-quality controlled environment that aligns to the governments Construction Innovation Hub standardised platform approach and aims to be 50% cheaper than equivalent market solutions.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NOVAI LTD	An AI-integrated cloud-based Clinical Data Trial System (CDTS) for a novel retinal biomarker	£164,267	£131,414

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

**\*\*Public Description\*\***

Novai Ltd. is a rapidly growing UK-SME specialising in biotechnology and data science. Novai was founded by Dr John Maddison, Professor Francesca Cordeiro and Aman Khan; the founders have 20 years' experience in the development and management of impactful and clinical projects. There is an unmet need in accelerating and de-risking drug development for blinding ophthalmic diseases. Current diagnostics and endpoints rely on observing structural or visual function changes, both of which take years to manifest. Novai will work to develop a Clinical Data Trials System (CDTS) integrated with AI on a cloud-based system using a novel retinal biomarker.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TINY MEDICAL APPS LTD	An innovative platform to create a single secure access point for NHS England patient records, regardless of patient location	£195,110	£156,088

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Tiny Medical Apps Limited (TMA) is a rapidly growing UK-based SME specialising in Health Technology. TMA was founded by Matt Bourne and Dr Greg Burch whose backgrounds are as an NHS systems developer, and emergency medicine doctor respectively. Healthcare research is hindered by piecemeal access to real-time consented patient data. The current COVID-19 pandemic has highlighted the pre-existing and now urgent need for a fast, developer-friendly, secure, consent-driven, and cost-effective digital platform that will allow access to patient records from any location. TMA aims to produce a prototype of their digital platform, Patient Cloud, that allows "serverless" integration with medical records for health-tech SMEs.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PK2M LIMITED	A ticket/token system enabling start-ups to trade equity for expertise	£245,509	£159,581

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Many innovative start-ups do not have the cash to pay the experts they need to grow their business. PK2M is building a platform called Consilience Ventures (CV) which provides tickets and tokens. Entrepreneurs joining the platform receive tokens in return for equity. They create tickets listing their requirements for expertise to solve problems. Tickets are circulated to experts who undertake the work in return for tokens. When the start-up is sold the value of the tokens is realised and paid to the experts as cash, enabling start-ups to gain expert input and experts to share the success of the start-ups.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MEDIC SPOT LIMITED	Arc Health for Care Homes	£159,901	£127,921

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The impact of Covid-19 on the care home sector has been huge, and in some cases devastating. This project will develop technology to help care homes achieve gold standard infection control without compromising resident care. The solution will respond directly to the challenges faced by Covid-19 in the care sector and the recent introduction of government guidelines for conducting virtual ward rounds.

### Focus of the Innovation

A new lightweight, portable version of the Arc Health clinical diagnostic station will be developed to enable a health examination to be conducted from anywhere within a care home e.g. the resident's bedside. It will be designed for maximum reliability and accessibility so it can be used by anyone, regardless of their level of technical ability or medical knowledge.

A novel, care home-specific set of software modules will:

- \* Enable carers to easily conduct NEWS2 (National Early Warning Score) observations and comply with RESTORE2 (Recognise Early Soft Signs, Take Observations, Respond, Escalate).
- \* Supply smart clinical vital sign analysis to support identification of health deterioration and help carers increase frequency of monitoring as necessary.
- \* Communicate data to the patient's GP who will be alerted to deteriorations in health.
- \* Incorporate patient records to assist continuity of care.

Where clinician attention is required, an integrated telemedicine consultation system (already developed by Medicspot) will enable timely intervention without a physical visit, reducing infection risk and providing significant time and environmental savings.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CAPSLOCK EDUCATION LTD	COVID-19 Workforce Re-Skilling Programme in Cyber Security	£171,808	£137,446

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project looks to address the rise in unemployment caused as a direct result of the COVID-19 pandemic by re-skilling individuals for roles within a sector that has a well recognised skills gap; the cyber security domain.

COVID-19 has accelerated the need for online communication and more than ever businesses are struggling to keep pace with this new and changing environment. Approximately 9.5 million UK workers have been furloughed throughout the pandemic and a significant percentage of these and other workers have already or will lose their jobs as a direct result of COVID-19. Alongside this economic crisis, cyber crime is at an all-time high requiring individuals to enter this sector in large numbers with practical real world experience and relevant skills.

Capslock is a fully online learning academy delivering all of the curriculum remotely. It is designed to revolutionise careers and remove barriers to life-changing opportunity. Capslock delivers live, online, instructor-led courses around emerging technologies, and our learners do not pay a penny until they are fully employed.

This project is to undertake the required research and development to design and test the delivery of a 16-week immersive online course, enabling 40 UK citizens to re-skill in cyber security with no up-front costs. This initiative will directly stimulate economic recovery, plug the urgent cyber security skills gap, and improve the UK's security posture. The curriculum will be built alongside key cyber security employers and is to be supported by the London Office for Rapid Cyber Advancement ([www.lorca.co.uk](http://www.lorca.co.uk)). The project will look to deliver a curriculum that prepares individuals for immediate impact in the workplace with industry relevant skills.

Cyber security has suffered from a lack of female specialists and currently has a significant issue in attracting women to redress this imbalance. Capslock has a gender diverse team to lead on this project and will actively seek to recruit female learners onto the course. This project will therefore ensure under-represented demographics are allocated places on the cohort. A minimum of 20 learners will be from under-represented demographics such as female, BAME, disabled, or neurodiverse.

This project has a positive impact on climate change and COVID recovery by reducing the need for learners to commute to a physical classroom/campus; remove the need for a learner campus; and eliminate the requirement for trainers to relocate/travel. Capslock unlocks the world's true potential by removing barriers to career-changing tech education.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MEDIA EXCHANGE GROUP LTD	Creation of a patentable technology platform to allow advertisers to buy television advertising space directly from any television channel in the market	£221,607	£172,853

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Media Exchange Group Ltd (MediaEx) is a rapidly growing UK-based SME specialising in media and advertising. MediaEx was founded by David Fenlon (a consultant in media buying with ten years' experience) and Rikki Gorman (a technology integrator and developer). Trading TV advertising space is a highly manual, archaic, inefficient and opaque process and an enormous amount of capital leaking out of the trade through inefficiencies. MediaEx will create a patentable technology platform which will be the first digital exchange to allow advertisers to buy TV advertising space directly from any TV channel in the market.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TISICS LIMITED	SEPAL: Single Piece tAnk Liner	£158,694	£126,955

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

The global need for greenhouse gas emission reduction is clearer than ever as a result of the COVID-19 Pandemic. Reductions in CO2 emissions are recordable and show that change is possible. The UK government has recognised that a post COVID-19 recovery should have 'green' initiatives at its core. But the impact of stopping global travel and international trade has been equally damaging to economies and livelihoods. Therefore a balance is needed to recover transport businesses and in particular aviation without continued emissions and damage to the environment.

Transport needs an energy source, electrification of some sectors of road transport and even some aspects of aviation is possible but current and envisaged energy density for batteries do not show a viable alternative for large passenger or freight aircraft to be entirely electric and have viable range and payload. This leads to the need for alternative and green fuels. Hydrogen if generated from sustainable energy sources is a clean alternative to hydrocarbons whether fossil or synthetically sourced. But the energy density of hydrogen is lower than hydrocarbons and therefore to achieve the volume/mass of hydrogen for viable range, aircraft must have very light structures and hydrogen storage tanks to offset this lower energy density.

This project will help develop TISICS unique lightweight net shape space focused chemical and gas tank technology to be scalable to meet the capacity and economics needed for aviation. The tanks will utilise lightweight thin wall aluminium diffusion bonded to avoid the need for lower integrity and heavier conventional welded manufacturing. The net shape technology enables adaptable tank designs with integrated mounting structures and transitions from aluminium to high integrity stainless steel or titanium pipework.

The fabrication process has the additional benefits of low waste manufacture typically 5% compared to conventional aerospace manufacturing where less than 10% of the material bought remains in the final product. This represents significant further energy and hence CO2 emission savings in the supply chain.

The development of the scalable technology for these tanks to beyond space system size presents new challenges for tooling, process conditions and inspection that will be addressed in this project.

TISICS builds on a 30 year history of innovative metal composite research across multiple sectors to be in a position to develop our space propellant tanks for gas and chemical propulsion, into a scaleable manufacturing method capable of delivering large, safe long service life hydrogen storage tanks for aviation use in the future. This builds on our extensive work on lightweight parts for current and future generation fuel efficient aircraft.

Developing this technology in the UK will enhance the existing manufacturing and export market position held by the UK. This sustains manufacturing jobs and creates new advanced engineering and manufacturing jobs supplying UK aerospace, space and automotive sectors and creating further export opportunities for the UK economy.

World leadership in hydrogen for transport is essential to move beyond hydrocarbon fuels and augments electrification through clean onboard hybrids or fuel cell power generation. But this needs light-weight hydrogen tanks.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DECORTE FUTURE INDUSTRIES LTD	Remote Monitoring of Elderly, Vulnerable, and Enhancing their Mobility, through Adaptive Intelligent Clothing (Single Platform Wearable) for Care Homes, Assisted Living and Personal Health: R&D, Expanded Testing and Product-Market Engagement	£212,176	£169,741

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Care homes do not presently have the resources to continuously monitor their residents' vitals. Research shows that such monitoring can lead to dramatically enhanced care and critical response, and a much more effective allocation of NHS and care resources (trials, even just of interval-based monitoring, have been associated with a 35% reduction in GP visits, 71% in hospital admissions, and 33% in emergency admissions). Yet for care workers, regularly monitoring vitals is a "time-consuming, new and potentially challenging task" (Barker \_et al.\_ 2020, in \_Age and Ageing\_ 49, 142), generally unsustainable, and continuous monitoring simply impossible.

The existing technological landscape for monitoring in care is fractured, with individual metrics requiring individual devices - meaning any attempt at consistent or holistic practices implies rapidly scaling costs in an already struggling industry. Care home owners and administrators "all [...] seem to agree that the ideal solution is a single platform into which all stakeholders, sensors and individual devices can feed and access data, and which records and manages everything in a single environment" (Technology and Innovation in Care Homes - The SEHTA Review).

Decorte Future Industries seeks to offer such a single platform, enabling consistent and continuous remote care and monitoring of vitals for the elderly and vulnerable, further adding mobility-enhancing capabilities, through intelligent biometric clothing. Designed originally in the context of Defence, in response to COVID19 the company redefined and reoriented its intelligent clothing platform to combat the coronavirus in Care Homes. The company won the highly competitive Innovate UK ' \_Business-led Innovation in Response to Global Disruption\_' competition to rapidly produce and field-test a basic version of its wearable IoT platform for the Care sector, as a feasibility study to mitigate the dramatic effects of the virus.

This project now seeks to move from feasibility study to experimental development, to address market demand in a real way. This will be accompanied by a sustainability study, as the underlying body-adaptive tech has the potential to disrupt clothing industry as a sustainable alternative.

The product being developed is washable, intelligent clothing that, through a patent-pending exoskeleton, adapts to any body-shape or size (thus allowing accuracy for embedded sensors, and further building towards a sustainable future by combating Fast Fashion). The clothing gathers, sends and remotely analyses biometric data. This includes early warning systems and distress detection. Embedded hardware enhances wearers' mobility and quality-of-life by allowing them to control surrounding devices with voice, gesture and touch; more intuitive than touching a screen/remote, a UI built on the human body.

The lack of continuous monitoring, combined with rapidly worsening symptoms, means that the Care sector was hit extremely hard by the COVID19 virus. Critical rapid response often simply comes too late. Lack of long-term data-gathering means inability to undertake preventative or predictive care. With this project, we aim to make the prototype we developed and field-tested in our feasibility study market-ready, designing new mass-producible and scalable versions, aiming to supply Care Homes across the UK with a vital tool for this and future healthcare crises.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MY SERVICED APARTMENT CONSULTANCY LTD	An innovative digital safety and security management platform to showcase accommodation compliance and procedures.	£211,453	£169,162

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

MY Serviced Apartment Consultancy Ltd. is a rapidly growing UK-based SME specialising in traveltech. MYSA was founded by Gary Hurst, Chang Joakim Everstin and Tony Pilcher - a Corporate Director, a Head of Technology Innovation and a former Global Travel Manager. Business travellers are increasingly looking for alternatives to hotel accommodation but often struggling to meet duty-of-care compliance. Suppliers do not currently have the means to provide evidence of their compliance credentials, therefore stunting corporate sales. MYSA's digital safety and security technology will be the world's first accommodation compliance platform providing accommodation providers with an automated process to prove their compliance credentials.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STRATEGIC REVIEW LIMITED	THF PathwAI	£194,241	£155,393

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

\_That Figures ("THF")\_ THF PathwAI (the name of this development) is a Ultra Wide Band Radio System (UWB system that uses complex radio waves to determine positions of objects inside buildings using triangulation) linked to a proprietary software solution that analyses staff and patient experiences in hospital outpatient departments, It will track and trace the journey of any user in real-time and will provide guidance for the least infectious path and alert the user in case of close proximity to other users (as well as tracing the same in the case of infections). It will also allow doctors to assess the most trodden paths for patients and staff when participating in a clinical pathway in an outpatient setting and optimise their interaction between medical staff and patients (behavioural, planned and ad hoc) and optimise their space and adapt new protocols.

The basis for this approach is that we use advanced positioning systems, already used by \_THF\_ in hospitals across the UK and Europe (125 sites visited to date and 50 of those in UK), and by using AI and machine learning on this data, and several other meta datasets, patients, staff and Hospital Management can automatically learn from, and respond to the positional data in real time.

Imagine you have an appointment in your local Hospital at 10am. You used to turn up half an hour early and be home around 3 in the afternoon having sat waiting for at least 2-3 hours (this is THF data and is based on data collected from 50 UK Hospitals collecting patient waiting time and pathway data). As a direct result of COVID-19 (Projections by the NHS Confederation show that the NHS waiting list is expected to rise from about 4.2 million currently to about 10 million by Christmas as reported in the BBC news on 10th June 2020) patients and staff are not attending Hospitals in the UK (The Yougov poll last updated on the 26th July 2020 shows between 40% and 50% of the people in the UK surveyed feared contracting COVID-19).

Now, with THF PathwAI in place, the staff in the clinic are aware of the areas where there is a build up of people traffic, where there are many entrances and exits with transmission risk, and patients for the day of your appointment are being routed via a specific path to ensure there is as small a risk of COVID transmission as possible. Meanwhile the AI machine is learning from the current clinic session and feeding the live results of that session into the dataset to support future decision making.

As patterns change and volumes of patients and staff on different days lead to different outcomes, hotspots, transmission risks and therefore "patient journey with lowest risk" may change and the team will be updated, which will in turn update patients and all participants will feel safe in the knowledge the THF PathwAI system has been installed to manage safer patient flow in their clinic in real time.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SUBLY UK LIMITED	Subly Enterprise Project	£277,433	£174,783

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

### Public Description

Subly UK Ltd. is a rapidly growing UK-based SME specialising in SaaS. Subly was founded by Holly Stephens and Keyvan Kasaei, whose combined backgrounds are as founders of two start-ups, with experience working with Google and Xerox. Video content is an efficient way to reach and engage with a large customer base. However, the expertise and outsourcing or multi-platforms required to create effective video content is time-consuming and expensive. Subly have identified a need for a sustainable and cost-effective tool that will reduce wasted working hours when producing video content. Subly aims to address this need by producing an affordable full-service video platform using speech-to-text technology.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OXFORD MOLECULAR BIOSENSORS LIMITED	The OMBTox project: Development of a prototype affordable 3D-printed device to utilise novel biosensors and their data to detect harmful environmental toxicity	£174,234	£139,387

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project aims to research and prototype a highly affordable, 3D-printed device for detecting toxicity in the field using OMBs novel molecular biosensors. The biosensor technology has recently emerged from the research base as OMB is a University of Oxford spinout, and as such the market is unestablished, requiring an innovative approach to enter and get purchase. In this project we will develop a prototype device able to quantify the light-output from our cutting-edge microbial biosensors. These novel biosensors are based on designed bacteria, and can be used to detect various important targets such as toxicity, genotoxicity, specific heavy metals and metalloids such as cadmium and arsenic, and also antibiotics. In the presence of these targets, the biosensors release light, which is able to be detected and quantified, to give information on the relative quantity in the sample. These targets can cause detrimental effects in the environment and in industries such as wastewater treatment plants and fish farms, and so OMBs biosensors can help inform the user on concentrations and provide an early warning system. Our target markets include waste-water treatment plants, aquaculture farms and brownfield sites - as the sensors can detect toxicity in under 30 minutes and inform the user if further testing is required, or if the plant is working correctly. In particular, this project focuses on value of the biosensor data, and aims to generate a dynamic database able to provide additional, highly useful data for the customer. As the device proposed in this project will be highly affordable, it will be more likely to be adopted in developing countries where it is most needed, and to this end we will not only be testing it in the UK, but also in Bangladesh and Ethiopia.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STREEVA LTD	Smart Tx	£212,363	£169,890

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

This project looks to develop a platform that will provide an automated, trusted integration between payments, data and services making it possible for the Government to roll out many targeted schemes in the future to support the economy during the recovery from COVID.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FRESH CHECK LTD.	A revolutionary colour-change swab test for easy and rapid surface hygiene testing that is 66% cheaper and can help businesses reopen after COVID-19.	£173,551	£138,841

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Fresh Check Ltd is a rapidly developing UK-based SME that was founded by John Simpson, Alex Bond, Nigel Trim, and Mark Tolson. Coronavirus and other pathogens have long lifespans on surfaces, leading to an indirect transmission of the disease (van Doremalen, 2020). Reducing the ability of pathogens to spread is crucial for preventing the spread of pandemics, and for ensuring safe conditions for workers, customers, and the general public (Rothman, 2013). FreshCheck's colour-change swab will be the first affordable, simple, and rapid test for confirming hygiene. This technology will use FreshCheck's patent-pending colour-change chemistry in an encapsulated swab. It will allow users to test high-touch surfaces and monitor hygiene through a simple colour-change.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FLIT (CAMBRIDGE) LIMITED	Weld free ebike construction method for UK manufacture	£218,055	£174,444

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

A reliance on traditional welding of tubular parts (particularly aluminium) to create a bicycle frame, has made it difficult to both manufacture bikes in the UK, and to integrate components into the frame. This project aims to develop a new construction method for an electric bicycle which does not rely on welding, but rather allows for the assembly of an ebike frame in a non-permanent way, such that it can be easily assembled and disassembled for servicing or reuse of parts. This in turn will make such an ebike suitable for leasing rather than outright purchase, thereby improving the affordability of ebikes, and also allow it to be manufactured in the UK, where welding costs are high, but assembly is more affordable.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PV3 TECHNOLOGIES LTD	Recycling and Reuse of Components for Water Electrolysers (R2WE)	£148,715	£118,972

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

R2WE is a project to develop a new to market remanufacturing capability for used components used in electrolytic hydrogen generators.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRAVELTIME TECHNOLOGIES LTD	Re-Imaging the UK's Built Environment	£214,966	£171,973

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In the midst of great disruption can come an even greater opportunity.

Covid-19 has created a massive disruption in how we use the UK's buildings (the 'built environment'). Thousands of businesses have closed their offices -- either temporarily or permanently. People 'forced' to work from home have found they are as productive as when they were in an office and their employers are rethinking their need for office space (size, location, facilities). In some cases, no office at all; in others, an office for occasional team meetings. Retailers, restaurants, cafes, and coffee shops are closing outlets as shoppers and diners opt for online and home delivery, and there are fewer office workers for lunchtime purchases.

The opportunity within this is that many organisations (including the UK Government) who own or operate the UK's built environment are rethinking what they now do with the office blocks and business parks that companies don't want to lease, and the high streets and shopping malls that losing more tenants by the day. The opportunity is to literally to 're-imagine how we use the UK's built environment'

This project will deliver a tool to quickly and easily display the potential uses for any building or area in the UK. It will help answer the question, 'what can we do with this building/space'. And that's our proposal.

We'll build a clickable map to 'score' every location in the UK on a range of user-selected criteria. It'll combine (for example) the current and planned Broadband speeds for every location, combined with Office of National Statistics, Land Registry, and Local council info, as well as our own TravelTime catchment areas (both 'normal' and 'covid safe' journeys). The tool will be easy to use, thus available to more than just Geographic Information Specialists and it'll be possible for users to select / deselect different data sets guided by an algorithm we'll create. It will turn a mass of data into actionable information.

We call this project 'Re-Imagining the UK's Built Environment' (or RIBE) because that's what it will enable. For example, the owner of two empty shopping malls could see that one site might be best re-purposed as affordable housing (the tool displayed the site's proximity to schools, health facilities and the shortage of affordable housing in the area); the other site might be best suited as a warehouse (the tool displayed its travel time catchment area and proximity to main road / rail /airports and the availability of a nearby suitable labour force). A business rethinking their need for office space could find a site for a new / smaller venue that all the team can reach occasionally (but not daily) with fast broadband and accessible via covid-safe forms of travel. Their staff could see new areas to live, maybe further away if they only have an occasional commute.

Such a tool doesn't exist today -- but with this grant, we can build it and enable the reimagining of how to use the UK's built environment.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DE-CO2 LTD	Decarbonising your home	£188,677	£150,942
OLD RELIABLE TECH LTD		£182,638	£146,110

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

It is widely accepted that to meet UK's Net Zero targets by 2050, we need to significantly reduce carbon emissions.

40% of CO2 emissions are from buildings, with 20% from residential property.

The De-carbonisation of existing residential property will also help "build back better" and greener, from the COVID-19 pandemic. The government is launching a £2bn "Green Homes Grant" in September 2020 to stimulate this economic recovery.

The challenge is how to deliver the volume of retrofit projects, efficiently and effectively?

- \* Every property and household is unique, demanding bespoke solutions and a holistic "whole house plan"
- \* Implementing the design and delivery of home retrofits, is costly and slow,
- \* With too much technical information, it's hard for consumers to obtain clear, simple advice
- \* Too few design and management professionals, make it slow and expensive.

Existing solutions, to provide consumer data are:

- \* Mandatory household EPC's (Energy Performance Certificates) giving unclear advice and un-validated costs.
- \* Professional consultants and software are too expensive and technical for domestic consumers

Previous initiatives didn't generate expected retrofit demand and outcomes, partly because the data were confusing and initial work was expensive, constraining initial decision making on investment strategies.

Our Innovation:

A Data driven solution, using new technology to create an innovative property service and business model.

- \* Use new technology, to streamline the process and reduce costs, to make data collection and analysis more accessible.
- \* Reduce the time and cost of surveys, by guiding the consumer to collect the data themselves, (with remote professional assistance by video).
- \* Novel Business model, using immersive technology to help consumers understand, visualise and plan their own "whole house retrofit plans".
- \* Creating a consumer oriented software (SAAS) platform, using gamification techniques, to help homeowners make informed decisions.

Purpose of this project is to develop and test a new software platform for consumers. This builds on work already begun, transforming data collection and delivering a remote design service.

The project automates this, creating a new business model, with a Software as a Service (SAAS) cloud based delivery platform.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Pilot studies will assess customer engagement, demonstrating an increase in consumers undertaking sustainable retrofit projects.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OMNI INTEGRITY LIMITED	Live Corrosion Monitoring IoT Development	£209,182	£167,346

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Omni Integrity is a rapidly growing UK SME specialising in the petrochemical, renewable energy and marine industries.

COVID-19 has had a huge impact on the integrity management industry, with revenues, supply chains and operations disrupted and, as a result, rapidly declining profit levels and health and safety standards. Omni can help overcome these problems by communicating directly with the facility and making required changes, often without the need for physical site deployment.

Founded by William McLean, Hollie Lawson and Alan McQuade, Omni aims to provide a digital cloud interface enabling the bidirectional flow of data/commands between physical and cyber systems.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADDITIVE MANUFACTURING TECHNOLOGIES LTD	CoNaSPro3D – 3D Printed Covid-19 Nasopharyngeal Swabs Post-Processing System	£168,600	£134,880

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Covid-19 has brought disruption to economic and social life in the UK and rest of the world. Widescale testing of millions of people will be required to safely reopen the economy and continuous testing will be needed long after that. This has created an unprecedented demand for Covid-19 diagnostics items, among which Nasopharyngeal Swabs are the most widely used.

Widescale usage of Nasopharyngeal Swabs has resulted in unprecedented demand in their manufacturing systems, especially in new generation, sustainable and Industry 4.0 compatible technologies. That is why industry has been trying to adapt 3D printing for the manufacture of required medical articles at scale, including functional specialised items such as Nasopharyngeal Swabs, ventilator splitters, masks etc.

3D printing offers the capability to rapidly yet sustainably create the necessary medical articles locally within the UK. This ability is of strategic national importance, especially in the times of crisis and shortage of vital components as seen during Covid-19 epidemic. In many cases it is more convenient, sustainable, and environmentally friendly to 3D print parts at the point of use rather than keep large stockpiles manufactured overseas. Nationwide, there are many 3D printing systems both in commercial and academic capacity and ability to utilise this resource at full capacity would help UK economy to grow during and after Covid-19 pandemic.

Additive Manufacturing Technologies has developed a method to post-process 3D printed Nasopharyngeal Swabs at scale using its smoothing machine PostPro3D. Innovate UK grant would allow AMT to fund the remaining R&D required to deploy this technology commercially.

Project will allow AMT to enter 3D printed Nasopharyngeal Swabs and 3D printing Healthcare markets. The work will be done at the AMT's facilities in Sheffield and several UK laboratories that are able to operate under Covid-19 working restrictions.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TOOLSGROUP LIMITED	Developing a suite of interoperable technical assets that support collaborative supply chain planning capability	£210,548	£168,438

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Brookes is a rapidly growing UK-based SME specialising in manufacturing, distribution and retail. Brookes was founded by CEO Martin Woodward who has 30 years' experience in supply chain management. Founding colleagues were James Triggs, Simon McCarthy and Karen Merrin.

Global supply chains are often complex, poorly connected networks driven by multiple planning teams working in different ways with sometimes contradictory data. COVID-19-dislocated staff and processes resulting in buying too much or too little inventory. Brookes plans to build a data-driven technology platform that connects business processes and tools with social network solutions to allow collaboration across businesses and beyond.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STREAM SENSING LTD	Real Time Rheology	£111,848	£89,478

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project pioneers real-time in-line rheology sensing - a commercialisation by Stream Sensing of new digital process instrumentation to measure in-line, real-time rheology: essentially how a liquid deforms with a force, similar to viscosity, and a critical measurement for many products since it defines how they flow out of tubes and bottles, and then how they perform in use. Typical product categories include liquid soaps, shampoos, mayonnaise and ketchup, toothpaste, surface coatings and speciality chemicals.

This measurement is critical for product quality but currently must typically be carried out in a Quality Control laboratory, taking time, and importantly risking ongoing production that may be found to be out of specification. Moving to a digital, in-line capability presents a globally unique opportunity for greater product consistency and improved productivity for processes operated by many major companies

The specific objective of the project is to scale up trial technology from 1" and 2" diameter pipes to a 4" pipe and industrialise the current pilot system for digital manufacturing and process control. This aims to address expected global market opportunities to reduce waste and enhance productivity in many processes across many business sectors delivering UK business benefits of employment and revenues and important contributions to the global challenge of climate change.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
thelittleloop	Tackling fashion's inventory problem: a circular-retail model for a sustainable, resilient children's clothing sector.	£259,867	£174,111

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

In the aftermath of corona virus, the need for a transformed fashion system, which removes the onus on multiple seasons and fast-fashion, has never been greater. Bricks and mortar store closures, stockists cutting back on orders, and consumers reducing their spending created a huge inventory problem for clothing brands, resulting in cancelled production orders, impoverished suppliers, and untold clothing waste.

And, while consumer behaviour was already trending toward more sustainable options pre-pandemic, the "quarantine of consumption" resulting from Covid-19 lockdown, is expected to accelerate the rejection of waste-producing business models and new demands for purpose-driven, sustainable alternatives.

An opportunity for change lies in the circular economy, in which high-quality items are given multiple lives, seasonal collections become increasingly irrelevant, and garments are ultimately recycled to reduce the overall impact of their production.

Our research and consumer trial have shown an appetite from British consumers for a circular retail experience which offers value, convenience and quality, alongside environmentally-positive outcomes. And conversations with over 20 brands have confirmed that they too are seeking ways to participate in the circular economy, in a commercially-viable manner.

We believe that enabling brands to directly participate in rental and resale, and reap commercial reward for doing so, will incentivise them to improve their manufacturing practices, design clothing for the longest possible lifespan, and drive a widespread shift from linear to circular business-models within the fashion industry.

This project will enable thelittleloop to build, test and launch a brand-garment management platform which will enable us to manage rental of brands' new garments, and their re-commerce schemes whereby previously sold garments are returned by customers for reconditioning and rental on our platform:

- \* The interface and data tools will make engaging in the circular economy easy to manage and appealing for brands with simple revenue reporting and garment lifecycle tracking.
- \* Garment performance will be monitored according to factors such as composition, fabric, usage and data will be available to brands to guide future manufacture.
- \* Data-driven inventory forecasting algorithms will guarantee maximum usage of each each garment. This will secure brand profitability, further enticing brands of all sizes to participate, and enable keen pricing of the service to provide the essential value needed to drive a change in consumer habits. Finally, it will guarantee the best possible positive environmental outcome.

Ultimately, we anticipate that the outcome of this project will transform thelittleloop into a viable commercial proposition in the UK, bringing the circular economy to both brands and consumers, creating jobs and injecting money into the UK economy.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPTRAK DISTRIBUTION SOFTWARE LIMITED	A web-based SaaS application to improve the efficiency and sustainability of the home-delivery/courier sector impacted by COVID-19	£180,017	£144,014

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

This project is for a web-based SaaS application to improve the efficiency of the home-delivery/courier services to handle the highly unpredictable and fluctuating delivery quantities seen in the current COVID-19 situation. Optrak has identified a viable strategy to deliver a unified depot-level planning system that can:

- \* Cope with highly varying demand through efficient utilisation of casual/part-time workers
- \* Derive maximum benefit from driver local knowledge
- \* Automatically level work between drivers
- \* Take into account different productivity of drivers depending on knowledge or other work rate factors
- \* Enable part-time working for drivers who want shorter shifts (e.g. to match school hours).
- \* Use analytics derived from proof-of-delivery data to automatically self-tune to cope with different driver performance and geographical factors (e.g. deliveries to blocks of flats).

Utilising this lightweight web tool, home delivery services would be able to upload orders, assets and customers and download routed trips that adapt their current fixed area plans to handle highly volatile order levels and patterns, as well as incorporate new staff, whilst improving the overall efficiency of their routes by as much as 20% - reducing carbon emissions and improving fleet resource utility.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MATLOGICA LIMITED	High-performance risk analytics system capable of operating at one thousand times current speeds with huge savings in resource utilisation.	£175,114	£140,091

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

MatLogica Limited (MatLogica) is a rapidly growing UK-based SME specialising in regulatory technology. MatLogica was founded by Dmitri Goloubentsev, Yauhen Mikulich, Evgeny Lakshtanov, and Natalija Karpichina, a quantitative analyst, a product manager, a mathematician and a strategy lead. Since 2008, regulations designed to prevent banks from taking on too much risk have resulted in banks pushing their modelling capacity and spending 20M annually on additional computing resources. There is a demand for cost-efficient, accurate, low-resource risk management tools. MatLogica's innovation allows users to accelerate analytics for large data sets at approximately a thousand times faster than current programs.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Syrona Women	ELSA: Medical grade symptom tracker, telemedicine and real-world evidence tracking app for Endometriosis	£172,052	£137,642

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Syrona Ltd. is a rapidly growing UK SME specialising in digital health.

Syrona is solving a substantial unmet sustainable innovation gap in the market that could support 2 million women in the UK with endometriosis/endometriosis-like symptoms. With COVID-19 disrupting access to sexual and reproductive health services, many elective gynaecological services have been suspended, having long-term implications for women with endometriosis/endometriosis-like symptoms.

Syrona aims to provide a medical-grade endometriosis symptom tracker, telemedicine and real-world evidence tracking app, which allows women to digitise their patient experience and reduce the need for in-patient appointments.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IMAGEHOLDERS LTD.	ImageHOLDERS Integrated Guardian Kiosk Project	£282,076	£174,887

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

As the world adjusts to a new operating environment imageHOLDERS can provide critical touchless self service solutions for use by both the private and public sectors to mitigate COVID-19 risks and allow companies, customers and government to operate effectively and safely with the welfare of staff, customers and the public in mind.

Specifically, we will be offering a range of kiosks which will combine fever detection and facial recognition with haptic/gesture-based input mechanisms. In this way we can make many interactions touchless and so significantly reduce the risk of disease transmission in public spaces, offices, gyms, hotels, airports, shops and many other environments.

By implementing these self service solutions we can materially reduce the risk of transmission between colleagues, customers and the public without negatively impacting the experience involved for all parties. Applications and benefits will include;

- Fever detection will take place at a distance of up to 4 meters and will not require staff to interact with customers/colleagues

- Facial recognition can be used for automatic identification and registration of visitors/customers/staff, reducing the need for face to face interaction

- Haptic devices can prevent the transmission of germs via touchscreen devices whilst retaining the functionality of these devices.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EAST-WEST INTERNATIONAL TRADE ANALYTICS LTD	Developing a cloud and browser-based software programme with detailed search capabilities to identify critical international trade opportunities for SMEs	£204,175	£163,340

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

UK-based SMEs are missing out on vital international trade intelligence which can be used for discovering new import/export opportunities. This is evidenced as 'less than a fifth of the UK's SMEs selling their goods and services overseas' (CEBR, 2016). 'A key challenge for exporters is the scarcity of reliable trade information on markets' (ITC, 2019).

East-West International Trade Analytics Limited is a rapidly growing UK-based SME that specialises in business intelligence SaaS. East-West was founded by Oliver Mackereth, Dr Ousmène Mandeng and Jason Newton. The company is solving an innovation need that could help secure and expand supply chains. This is in the form of a software programme, Hanse, which will analyse international trade with detailed search capabilities to identify critical trade relationships.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DOORSTORE (WIRRAL) LIMITED	Opening the door to a greener future - utilising sustainable materials and processes in the residential door market	£104,883	£83,906

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

This project looks at designing and developing new production techniques and processes to reduce the carbon footprint of the multi-million pound UK residential door industry.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
METADATAWORKS LIMITED	An Innovative data classification engine utilising AI that can increase the productivity of data scientists by 100%.	£179,080	£143,264

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Analysts within the NHS currently struggle with disparate, messy and incoherent data and the status quo is manual curation. METADATAWORKS is a rapidly growing UK SME specialising in healthcare informatics, and currently developing an AI data classification engine that doubles the productivity of data scientists. METADATAWORKS will have the first metadata classification engine trained on data from UK healthcare datasets. This offers potential savings of £0.5M per year, in addition to enhancing policy-making by offering improved data. Founded by Adam and David Milward, METADATAWORKS promises to generate a year-five post-project revenue of £20M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VIP WORLD SERVICES LIMITED	Travel Hands	£216,044	£172,835

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Travel Hands is a service that pairs Visually Impaired People (VIP) with registered and verified volunteers to walk together towards their similar destinations.

Traveling safely, cheaply, and independently is challenging for 285 million VIPs across the world. COVID 19 has made it tougher for them to move around in the city as they normally require physical assistance to navigate.

We target to serve the 2 million people with sight problems in the UK by enabling them to use the public transport system safely as the lockdown eases with our platform. Our first target being 42,000 Visually Impaired People (VIP) population registered with the government services in the city of London.

Travel Hands is aligned with the existing resources and support for the visually impaired people in the UK to make travel convenient and safe. We are aligned with the government initiative, "support bubbles". Additionally, we would like to partner with Transport for London to complement and support them in organizing the travel journeys for VIPs.

By connecting VIPs with registered and verified volunteers in the local neighborhood, we will increase the physical activities and mental support system for both the parties. Studies have proven that physically active people have up to a 30% reduced risk of becoming depressed, and staying active helps those who are depressed recover.

Travel Hands is the first product of the parent organization, VIP World Services, designing inclusive services or digital platforms for the visually impaired people by including them in the process, testing, and designing solutions for them and with them, also rewarding them for their inputs.

Travel Hands will benefit enhance the lives of VIP, reduce the expenditure of the government services dealing with VIP, and improve the environment:

- \* Ensures that VIP saves 30 minutes on time for every journey undertaken and £100 a month on travel costs per month.
- \* Create new social interactions and explore opportunities in life they never enjoyed before.
- \* User friendly to VIPs following accessibility guidelines and user perspective.
- \* Gives VIP access to the VIP World community that is for knowledge sharing, practicing on IT skills, and encouraging each other to get jobs.
- \* Reduce the carbon emission by reducing the use of taxi and single-mode transportation by VIPs and also improve physical and mental health by encouraging walking and social interaction.

Please visit our website for further details - [www.vipworldservices.com](http://www.vipworldservices.com)

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MEMESCAPE LIMITED	An AI communications platform connecting SMEs and communities to allow them to share resources and exercise greater buying power, saving SMEs £55,000 a year on average.	£208,414	£166,731

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Founded by Jo Feinstein, Darren Lipschitz and Cord Schneider, Memescape Ltd. is a UK SME specialising in InfoTech. The isolation and lack of support among SMEs was highlighted during the COVID-19 pandemic. As SMEs and community groups operate independently, they have a smaller say in matters, have limited resources, and are prone to making similar mistakes. Memescape aims to produce an AI communications platform to connect businesses and communities, allowing them to share or pool resources. This would solve a substantial unmet sustainable innovation gap in the market that could save SMEs £55,000 a year on average.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BIOPHILICA LTD	Biophilica Leather: Turning Green Waste into an Advanced, Sustainable Material	£218,679	£174,943

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Fashion waste is a huge problem: It is linear (as opposed to circular), carbon-intensive, water-intensive, destructive to biodiversity and very environmentally unsustainable. The **\*\*fashion industry is responsible for 10% global emissions\*\*** and uses vital resources, such as fossil fuels and water, on materials like cow-hide leather and cotton. Plastic microfibres, which are not biodegradable and derived from fossil fuels, are also one of the largest sources of microplastics, contributing 35% of all marine waste. Fashion processes, such as dyeing materials are, in the most part, toxic and harmful.

**\*\*COVID-19 has demonstrated the\*\*** **\*\*fragility of the global materials supply chain\*\*** and the need for UK to build resilience in the supply of raw materials. Biophilica presents an opportunity to produce premium textiles here in the UK.

Our vision is to scale an alternative circular material that is similar to leather but leaves no harm to the environment.

**\*\*Biophilica Leather is a vegan leather that is:\*\***

- \* Made from green waste that would otherwise be used for compost, and contains no petrochemical materials or compounds derived from fossil fuels -- no polyurethane or PVC
- \* A circular material that biodegrades on land and in water
- \* Carbon negative and offset by being a natural source of waste derived from plants
- \* Low water, and uses ~0.003% of the water used to make the same amount of cotton
- \* Zero waste and circular, where all waste materials from the production process can be reused

In early lab testing, Biophilica Leather is more durable, versatile and hard-wearing than comparable synthetic leathers. It is an appropriate substitute that will excel under the same strains and stresses of bags, belts or shoes made from alternative leathers, and will be extensively tested to ISO standards within the project.

The number of people identifying as vegan has **\*\*increased by 25% in the Covid-19 pandemic\*\***. The vegan leather industry is rapidly growing and projected to be worth \$89.6bn USD (2025). Policy incentives to shift to alternative materials include (i) intention to reduce microplastics and marine pollution, including UK regulation on single-use plastics, (ii) growth of the circular economy, supported by business-led initiatives such as the Ellen MacArthur Foundation (iii) MP debate on a 1p clothing tax for high street retailers to fund an annual recycling scheme. Biophilica offers a tangible and scalable solution that could be commercialised by 2022\.

This project involves Biophilica, CPI, Intertek and Southwest Environmental Limited.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 1 (Temporary Framework)

Competition Code: 2006\_COVID19\_RECOVERY\_INNOV\_FUND\_WAVE1

Total available funding is £75 million

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CREATIVE EC LIMITED	An Innovative AI driven water event meter, designed to address water shortages, , save on bills and reduce water leaks by up to 7%.	£215,397	£172,318

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

Creative EC (Creative) is a rapidly growing UK-based SME specialising in water efficiency. Creative was founded by Keith Ali and Eamon Murchan and is lead by Emma Call, Steve McCorry. The founders have experience in global sales and SaaS technology. Within 25 years, major cities could face having no water, of which London is in the top ten. Climate change, increasing population and consumption is causing a sustainability concern. The Environment Agency is calling on water companies to invest in reducing leakage. Creative's Waterfall device is designed to address water shortages, therefore, reducing excess abstraction and reducing the need for new reservoirs.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results