

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CADSCAN LIMITED	Digitising in-store footwear retail	£99,983	£99,983

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

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## Project description - provided by applicants

In 2019 218m items of footwear were sold in the UK generating sales of £10.5b, and 100,000 people are employed in retail and wholesale. The impact of Covid-19 has been severe causing a 30% sales drop because of reduced demand. Excess stock, numerous store closures and redundancies are likely to make recovery slow.

Online sales accounted for 27% of footwear sales in 2019, growing 12% due to the wider selection available, perceived price differences and convenience. Yet 47% of consumers try footwear in-store before purchasing online. Comfort and fit remain important, particularly for children with growing feet. While online retail has advantages, particularly centralised distribution and lower fixed costs, these are countered by high return levels and shipping fees.

The footwear industry is also under pressure for its poor sustainability. 90% of the 25 billion pairs of shoes manufactured annually end up in landfill. A typical pair of synthetic trainers generates 30lbs of carbon emissions, equivalent to a 100-watt bulb burning for a week, two-thirds during the manufacturing process. 98% of shoes sold in the UK each year are imported, the majority from Asia.

For high-street footwear retail to recover and survive a new approach is needed that substantially lowers cost, widens purchase channels, provides a compelling, safe and convenient consumer experience, presents unlimited choice, enables sustainable product manufacture and provides value for money.

We will achieve this through digital technology, specifically 3D imaging, augmented reality, computer aided design and additive manufacturing, redefining the way in which consumers purchase footwear.

A novel 3D foot scanner will accurately capture the full foot shape and load zones, generating a shoe template with the perfect size, fit, cushioning and support that can be customised and tried on using a virtual mirror. Once the customer is satisfied, bespoke shoes will be sustainably made-to-order.

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PAWZ LIMITED	Pet Telehealth Marketplace	£71,026	£71,026

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## Project description - provided by applicants

PawSquad is a veterinary teleadvice/teletriage service providing free-at-point-of-use online advice via live text chat and video consultation. Currently the platform is designed as a 24/7, direct-to-consumer, instant access service, offered to pet owners by our partners (pet insurance companies, pet charities, online pet retailers and other pet care businesses) as a value-add to their core product or service. Since the emergence of Covid-19, and especially during lockdown, there has been an unprecedented increase in demand for veterinary telehealth services, with traditional veterinary practices scrambling to find a telehealth solution to service their clients remotely. PawSquad monthly sign-ups have also increased some 9-fold at the peak of lockdown, demonstrating the rising demand for veterinary telehealth solutions. This demand is predicted to be a lasting change in consumer behaviour that has simply accelerated an already existing trend towards telehealth adoption. PawSquad aims to adapt its well-established direct-to-consumer offering to enable vets in traditional bricks-and-mortar practices to also offer a telehealth service on our platform. This will create a totally unique hybrid offering that will enable pet owners to access on one-hand the PawSquad 24/7 instant advice service (staffed by PawSquad's in house team) and on the other hand, remote online access to their own veterinarian. In addition, the platform will be expanded to include other pet care professionals (behaviourists, nutritionists, breeders etc), making it a one-stop telehealth marketplace for all pet care services. Such a service does not exist anywhere else in the world at present. Telehealth services offer the potential to reduce unnecessary trips to physical service-delivery points, like veterinary practices, breeder premises or traditional home visits by pet behaviourists, supporting environmental goals as well as providing a convenient, lower-cost way of delivering these services. An online marketplace platform like that proposed here is a highly scalable solution that is easily adapted to new markets and languages, making the impact of any investment that much greater.

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NOVA DRIVE LIMITED	ELMO: Scaling EV subscriptions through tech	£98,552	£67,015

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## Project description - provided by applicants

Through this project, elmo is looking to create the world's first fully-integrated personal electro-mobility solution. This will offer customers electric vehicles (EVs) through all-inclusive (insurance, maintenance, home energy, charge point, public charging) and flexible subscription contracts.

The project will build on elmo's current MVP and validate the business model of providing flexible EV subscriptions at scale. The aim is to provide customers flexible access to an EV, with everything included in a single monthly payment, for the same monthly price as a long-term lease, without the normal upfront payment.

By removing the upfront costs associated with EVs, elmo makes this technology financially accessible to more people. And by making the subscription all-inclusive, elmo reduces the complexity and hassle of switching to an unfamiliar way of using a car. The subscription solution, therefore, removes the last remaining barriers to wide scale EV adoption. The flexible nature of the contract also offers a low-commitment option to people looking to try an EV for the first time and unsure if it will fit their lifestyle.

The elmo solution directly impacts a number of sectors that have experienced significant disruption as a result of COVID-19. The supply chains for the automotive industry have been stressed and the economic uncertainty means that new vehicle sales are highly uncertain. This is especially true of the EV market, where the high upfront costs are expected to translate into lower uptake during the current recession. In a more general sense, the elmo model impacts a wide range of industries by allowing staff to return to the workplace without taking public transport. The flexible and low-commitment nature of the offer provides an optimal personal mobility solution during the current uncertainty.

Electric vehicles are a key part of the Government's decarbonisation strategy. It is essential that their uptake continues to increase during the disruption caused by COVID-19. Elmo provides a solution to get a significant volume of EVs onto the market and continue to promote their adoption through a model that aligns with consumer needs during the current pandemic.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MIVAN MARINE LIMITED	Mivan - Self-sanitising Modular Bathroom Pods	£99,898	£99,898

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## Project description - provided by applicants

**\*\*Mivan Modular Solutions\*\*** - Due to the significant business downturn due to COVID-19, Mivan are having to rapidly adopt new products and processes in an effort to diversify our business and secure new orders. Our innovation idea is the creation of Mivan Modular Solutions involving the design, manufacture and supply of steel framed self-sanitising bathroom pod units.

The key feature that Mivan Modular can offer is that with social distancing becoming the new norm, factory works can be scheduled to run in parallel with onsite construction works. Our proposed bathroom pods will be manufactured and fully fitted to include tiling and sanitary ware finishes which can service the residential, hospitality and marine sectors with a fully functional plug and play pod system embedded with antimicrobial innovations to enable the pods to self-sanitise.

Our proposed antimicrobial innovations aim to; prevent, treat and sanitise all surfaces to reduce the risk of transmission and infection of SARS-CoV-2 (COVID-19).

The bathroom pod units will be manufactured in an off-site environment, sealed and shipped to site. Pre-fabrication would take place in Mivan's 11,000m<sup>2</sup> factory in Co.Antrim, one of the best-equipped joinery facilities in the UK. The off-site nature of the antimicrobial bathroom pod 'Mivan Modular' delivers key benefits:

- \* Reduced on-site construction time
- \* A self-sanitising sealed unit
- \* Improved programme certainty
- \* Quality controlled product in factory conditions
- \* Reduced on-site labour and supervision
- \* Sustainability
- \* Improved on-site health and safety
- \* Off-site service testing

Once details and project requirements have been agreed with the client/project team, the fundamental concept and process behind Mivan Modular remains the same.

Mivan's in-house Design Team would work closely with the client and/or project architect, engineering an innovative and best value solution. The earlier that Mivan's Design Team can be engaged, the greater impact and value they will have in the end product. The team would build on early concept designs from some of the world's leading architectural practices and transforming these into workable, manufacturing drawings in some of the UK's most prestigious projects.

In summary, Mivan Modular Solutions offer bespoke offsite modular components developed and prefabricated within a factory-controlled environment to improve cost and programme certainty along with factory controlled quality products.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
WYSER LTD	Leveraging artificial intelligence to optimise customer data capture and processing in a post COVID-19 world	£95,106	£95,106

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## Project description - provided by applicants

The reduction in access to legal aid and COVID-19 has had a detrimental impact on the functioning of the UK justice system, our economy, and society at large. Consumers and businesses have seen cases suspended or delayed with a significant reduction in accepted new cases -- justice delayed is justice denied. The backlog of existing cases and the considerable volume of pending cases, coupled with the inevitable deluge of coronavirus related litigation, threatens to have a long and lasting effect on the UK justice system and our economic growth.

At Wyser our vision is to build a company that increases access to justice by significantly reducing the costs for businesses and citizens to resolve their disputes but also by simplifying how justice can be accessed.

This project is focused on increasing access to justice through the use of artificial intelligence. We are developing an innovative disputes triage tool which significantly improves efficiency, reduces case backlogs and improves engagement between legal bodies and their customers (case initiators and respondents).

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ANTOBOT LTD.	Automatic Track Width Adjustable System for Agriculture Mobile Robots	£89,548	£89,548

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Project description - provided by applicants

This ambitious innovative project is to deliver an Automatic Track Width Adjustable System (ATWAS) for Agriculture Mobile Robots (AMRs). With a unique controls system and mechatronics design, the ATWAS system can automatically adjust the track width of the AMRs to the desired configuration within 60 seconds. By providing this much-needed adaptivity, the ATWAS system holds great potential to accelerate the deployment of the AMRs in the real world, helping to resolve the labour shortage caused by Covid-19.

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MASTIHA WORLD LTD	FEED HUB & SPOKE: Food & Essentials E-Delivery with High-street Hubs	£99,986	£99,986

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## Project description - provided by applicants

The FEED HUB & SPOKE project introduces an innovating approach combining:

- \* Cloud Kitchens
- \* Coworking Spaces
- \* Food & Parcel Combined Deliveries
- \* Connected and Autonomous Vehicles (CAVs) and Drones
- \* Zero-Carbon Deliveries

The **HUB** will revitalise the high street by converting struggling restaurants into a new commercial model. Currently, restaurants are serving one cuisine (eg Greek), which is being prepared at the back (kitchen) and served at the front. This is a high-overhead proposition, with limited flexibility relying on rapid customer turnover with significant spend per head. In the HUB model, the back is converted into a shared kitchen space where multiple vendors can work and is supported by a network of cloud kitchens for greater food variety. The front is converted into co-working spaces, increasing space utilisation, where food can be consumed (from this HUB or associated cloud kitchens). This will support the new decentralised workforce and start-ups to be productive while providing income throughout the day (not only at lunch&dinner). The operational staff required is minimal, thus reducing costs.

The **SPOKE** is a compact pickup and ordering kiosk with an integrated payment method. Ideal for business parks, science parks or even public places, the SPOKE allows food and freight deliveries to be aggregated, disrupting the current model where couriers deliver each order separately, which causes congestion and increases costs. SPOKES will enable any shared space to be transformed into an eating area, a model currently tried in city centres only when adjacent to restaurants. SPOKES will be connected to HUBs in an innovative network that will be designed to enable the optimisation of flows (e.g. reduced costs, times, polluting emissions) through consolidation of goods, collaboration among stakeholders, and the use of innovative tools and delivery systems.

These will be supported by:

- 1) **AirB2B platform**: is a platform to enable easy renting of professional spaces, such as co-working spaces, cloud kitchen spaces or meeting rooms. This will enable restaurants, colleges, community centres etc to share their kitchen space and users to book HUB co-working space. Food vendors will undergo due-diligence and be able to supply HUBs, SPOKES or direct to consumer delivery via the existing FEED app. We will also liaise with other co-working space, meeting room or studio providers as the next step. The AirB2B platform aims to enable access to the spare capacity of commercial spaces and reduce the barriers to remote working and new business.
- 2) **Zero-Carbon Fleet**: in our operations, we already deliver food & essentials through a combination of EV and e-cargo bikes, and drone delivery trials (VLOS). We will explore the feasibility of CAVs and expand our drone analysis
- 3) **FEED B2C platform (existing)** for customers to order in HUBs or home.

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This ambitious multi-faceted project will a pilot of the AirB2B platform, developed in collaboration with a Design Consultancy 40Two, a SPOKE in one business Park in Oxford, Trial and evaluation of a CAV hot food delivery (at RACE, Culham) and finally launch a HUB to test and validate the model in Oxford or London.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
TOPOLYTICS LTD	Improving resource efficiency in the waste system post Covid-19	£99,796	£99,796

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## 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. Through Covid-19 the ability of the waste and recycling industry to recover materials and divert from landfill has been significantly restricted due to the impact of lockdown on collection and processing infrastructure, whilst the volume of waste created (particularly post consuming packaging and mixed, rather than segregated waste) has continued to increase. For example, the mountain of plastic waste is increasing due to its use in PPE, ventilators and protective screens.

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 use 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 global commercial opportunity. It seeks support to further develop WasteMap(r) and accelerate its global commercial deployment. By applying its innovative, data-driven approach to the management of materials - WasteMap(r) is becoming a smart grid for the world's waste.

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NOTE TAKING EXPRESS LIMITED	ANGEL - Ai Notes GEneration for Lectures	£99,648	£99,648

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## Project description - provided by applicants

ANGEL will use Artificial Intelligence (AI), especially Natural Language Processing (NLP), Computer Vision (CV) and Knowledge Graphs (KG) to create automated summary notes and curated relevant content to support student studies which will complement Note Taking Express's current digital classroom solution. In an online teaching environment, students often lack the concentration or attention to detail required to abstract a clear set of notes for subsequent study.

Notes and content will be generated during live lectures enabling students to have accessible and focused content, mind maps and notes to promote their studies. NTE have 50,000 hours of data and almost 50 million words of existing content we will use to train the algorithms for this project.

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. ANGEL will be compatible with each of these platforms as well as being integrated into NTE's own digital classroom solution and will provide a third dimension for students in an otherwise two-dimensional learning space.

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. In order to maintain and grow student numbers a more engaging and supportive technology platform needs to be deployed for students to maximise their learning experience. ANGEL provides the support that many students will require in the new online learning dimension of post COVID-19.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
REIO ONE LTD	ProductSearch: Optimising online local product inventory search and facilitating ecommerce purchasing for local businesses	£97,180	£97,180

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## Project description - provided by applicants

The pricing and monopoly power of online platforms such as Amazon and eBay means that online consumer spend is being directed to these platforms, which extract significant pricing power from merchants. For example, 30% of the transaction price are typically Amazon fees, and further Amazon sponsored word advertising frequently pushes costs above 100% of the purchase price, meaning that the 65% shelf-price of retail is eclipsed by the overall cost of selling on Amazon. Sites such as Shopify enable DIY online eCommerce stores to be created, but unlike a well positioned store on the high street, getting footfall requires significant advertising and marketing spend. Given the optimisation algorithms, typically the customers that pay the most, end up on top of the rankings, those with the biggest online footprint, favouring those with large budgets, such as large companies.

Small retailers are increasingly being squeezed out of the market as more retail spend goes online. During lockdown, these were the companies that suffered most from the sudden lack of footfall. Yet, these shops provide a vital component of community life and also have many other competitive advantages, such as local produce, convenience, instant store pick up, delivery within the hour using Deliveroo or other delivery. However, to capitalise on these benefits, consumers have to be able to search for local products. Facebook Marketplace and Gumtree do this for private sellers of all types of wares, but this is not professional and if someone is looking for a new Dyson, just as searching for a new car on Autotrader. We have search for real estate on Zoopla, with filters for max price, or number of rooms. These are all parameters and these parameters are missing when looking for products online.

Both product search and the ability for retailers to list their items, not on Amazon or eBay, but on their own websites or simply enable a purchase through a rudimentary online inventory page are not available. This means online consumer spend goes to the giants, whereas the Dyson is also stocked at Joe's Hardware, the consumer traffic will go to Amazon unless Joe's Hardware has a website and has spent significant amount on marketing ads, and generating content to enable it to go higher on Google. The customer acquisition cost for Joe's Hardware, and the fact that it is a small retailer, means it cannot compete with Amazon. That is, unless, ProductSearch enables the searching of its inventory for availability and with filters. The Dyson at Joe's Hardware may be more expensive marginally, but the ability to buy local means a consumer may pay a little extra for delivery within the hour. There is a reason the 'last mile delivery' is the most expensive and couriers to Amazon have been trying to work out how to reduce costs and maintain smaller local hubs. These hubs essentially are our retail stores on the high streets, and with ProductSearch, we'll re-direct online revenue from large platforms like Amazon to local shop websites and inventory listings.

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FOURWHO LTD	Project Visum	£99,249	£99,249

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Project description - provided by applicants

FourWho Ltd (Known as Imployable) are leading the way in career management, education and learning innovation having produced an award-winning disruptive career management app aimed to help users map and track their way in to a meaningful career.

The proposed project 'Visum' will see the development of an innovative and disruptive recruitment and education technology solution that meets the needs of public and third sector organisations seeking to gain real world evidence in the gap between skills preparation and the job market, through the utilisation of the imployable app and powered by Visum.

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RANPLAN WIRELESS NETWORK DESIGN LTD	RSaaS: Radio Signal as a microService	£99,138	£99,138

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## Project description - provided by applicants

COVID-19 has had a profound impact on mobile network operations: 1) network loads have surged far beyond capacity; 2) network energy consumption has increased, resulting in a higher CO2 emission; and 3) engineers have limited access to sites, in particular, for in-building wireless networks, which has caused significant problems on network deployment and maintenance.

The above points emphasise that: 1) mobile networks must be able to adapt to changes; 2) the planning, commissioning, and operations of radio access networks, need to be automated so that the number of physical site visits, can be minimised.

To this end, many what-if scenarios need to be carefully evaluated before changes of network parameters are commissioned, e.g., how the changes of network parameters will impact the network coverage. Radio propagation models play a central role in evaluating these what-if scenarios. Furthermore, network automation calls for interactions between radio signal prediction with an eco-system of data analytics, optimisation, and operations support system (OSS) software tools, which makes a migration to a cloud computing platform based on microservices, imperative.

In this project, we will enhance Ranplan's **world first** combined indoor-outdoor radio propagation engine with machine learning algorithms and implement the new radio propagation engine as a **microservice** in a cloud-computing platform. The first part of this innovative approach will lead to a universal radio signal (or interference) prediction engine that works in **all scenarios** (indoor-outdoor, millimetre waves, etc), while the second part will make it **universally available** so that it can easily interact with other services and make use of the vast computing power on the cloud. develop a stochastic radio propagation model based on

Mobile networks are a key enabler for economy, social connectivity, remote working/ teaching. As the use of network increase, so does energy consumption. Recent studies suggest that mobile networks will produce 320 million Tonnes of CO2 by the end of the current decade. Ranplan believes that the proposed project forms a foundation to enable network operation automation, resulting in a substantial reduction of use of equipment and CO2 emissions.

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HBXL GROUP LIMITED	Transforming construction SME digitisation adoption via Building Process Model Builder	£98,359	£98,359

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## 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.

Concurrently Government is pressing the industry to;

1. increase production of new sustainable houses and extensions
2. improve the thermal performance of existing homes
3. enhance productivity assisted by construction digitisation.

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

Every year hundreds of thousands of houses, extensions and small industrial projects are commissioned by clients from Architects/designers prepared on CAD, 3D modelling systems, or by hand. Similarly SME Housing Developers and Design & Build firms (including Offsite Manufacturers) draft significant volumes of plans in-house.

For Architects/designers the priority is to generate designs creatively and cost effectively given the project value is often quite low, charging modest fees. It is also important that the project can be built within the client's budget. The provision therefore of an accurate cost estimate generated direct from the plan would be advantageous rather than using rule-of-thumb or estimated separately.

Housing Developers and Design & Builders have similar initial challenges, but they also then have to manage the entire delivery of the project on budget, on time.

For all users/clients, it is important to explore sustainable fully-costed options. However, with current, often disparate non-integrated systems, this can be prohibitively expensive as creating multiple drawings/specifications/estimates in different software is time-consuming.

What is needed, is a toolset to quickly generate plans and 3D models of multiple fully-costed project options, instantly ascertaining all labour and materials with a detailed project plan, reflecting the content of the work and, for constructors, their own resources, including all process management and documentation to efficiently construct the building.

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

The solution to this challenge is HBXL's proposed **\*\*Building Process Model (BPM) Builder\*\***, front-ending HBXL's existing software with brand new, fully-customisable parametric templates to rapidly produce 2D working drawings, 3D models and complete construction datasets for houses and 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

These parametric templates can be Lego-blocked together to create an infinite array of fully digitised projects in minutes, not only providing the raw information (drawings, labour, plant and materials schedules) to construct the project, but also all process management information including Building Regulation documentation, estimates, Gantt chart, task management tools and Covid-19 health and safety documentation).

Using the BPM, users can easily optioneer low embodied carbon/energy, low impact, restorative and regenerative environmental approaches comparing speed-of-delivery and overall costs.

The resulting output can then be shared amongst and utilised by the entire project team in HBXL's soon-to-be-released Construction Cloud management software.

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

This innovative project addresses Government's twin goals of the ISCF Construction Sector to digitise the construction industry and deliver more sustainable buildings.

The Building Process Model Builders timely approach automatically digitises the entire construction process direct from plans in minutes, saving days of work over the life of each project. Project outcomes have the potential to transform the way digitally-excluded less tech-savvy, time-pressured SMEs engage digitally, delivering incredibly easy-to-use tools, saving large amounts of time, simultaneously improving delivery speed, 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 and track the lifecycle of solid waste management for Property Managers and waste stream stakeholders in Kenya	£92,832	£92,832

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

De Graft Management (DGM) is a software specialist that has developed a Property & Asset Management (PAM) system for banks, insurance companies and property managers in Kenya who want to start using technology to manage buildings and related services efficiently. Using the PAM system as a platform, our project addresses the challenges of managing waste in Kenya under the constraints imposed by COVID-19 by developing an integrated Artificial Intelligence (AI) mobile-enabled platform that promotes circular solid waste management.

The UN's Strategy Guidance: Solid Waste Management Response (2020) reports remote working during COVID-19 has increased waste generated from buildings; disrupting the collection, treatment and disposal of waste and resulting in major hygiene and public health issues. The UN Environment Programme 2020 details the adverse impacts of uncontrolled solid waste littering and incineration on the environment.

Waste management is a major challenge in Kenya. Nairobi, the capital, produced 2,500 tonnes daily in 2018, only 38 per cent of which was collected and less than 10 per cent recycled (Nairobi County Government). Improper disposal of medical and consumer waste in Kenya is raising concerns as residents' usage of personal protective equipment (PPEs), face masks and gloves have increased.

To reduce environmental impacts the UN advises all stages of waste management should be addressed, including generation, collection and recycling (Sustainable Development Goal (SDG) 11 - 2020).

COVID-19 has significantly changed the way our clients work.

We will develop an Artificial Intelligence (AI) mobile-enabled platform to promote circular solid waste management in Kenya. It will integrate with the DGM Property & Asset Management system and will:

- Engage waste stream stakeholders in a single, centralised and secure cloud platform
- Allow stakeholders to automate, track and monitor the lifecycle of solid waste management
- Address key pain-points in the sector such as uncontrolled waste littering and inadequate recycling levels.

Our technology will:

- Automate the disposal, collection and recycling of waste for tenants, owners, landlords, property managers, waste collection and recycling service providers
- Process waste management issues, complaints, feedback, requests for refuse and recycling bags and collections
- Support regular and safe waste collection and recycling and improved health and safety

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

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- Automate communication and workflows between stakeholders via reporting and analytics
- Incentivise tenants and owners via the incorporation of discounts on service charges levied by property managers based on the level of recycling undertaken
- Provide service providers' analytics based on the amount and type of waste generated, collected and recycled
- Provide segregation of waste and recycling training through local partners
- Build awareness of solid waste source separation and recycling as essential components of sustainable waste management
- Automate remote working
- Improve the tenant/property management experience; reduce time logging and resolving issues
- Improve efficiencies; save time and reduce costs

DGM will develop a strategic and mutually beneficial long-term relationship with local subcontractors and address SDGs 8 and 11 via technological upgrading and innovation, new employment and entrepreneurship opportunities and environmental sustainability.

We will launch in Kenya and have identified potential for future long-term viability, expansion and commercialisation across Africa and globally.

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

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



## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TALLY MARKETPLACE LIMITED	Tally Marketplace	£62,224	£62,224

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

Tally's mission is to make remote working truly productive and sustainable whilst creating demand for the UK hospitality sector.

It is clear that Covid-19 will have a lasting impact on accelerating flexibility in mainstream working practices. Of 1,000 surveyed employees, 92% admitted their views on remote work due to the pandemic had changed for the better. Employees are expecting to work somewhere other than the office at least once per week, 42% in co-working space and 31% from a café.

Businesses are willing to pay a fair price for flexible working space for their employees. They recognise that: (1) the cost of doing so is significantly less than the cost of office space; (2) that they cannot expect all employees to have a suitable workspace at home; and (3) that commuting long distances is not an efficient use of time or sustainable.

Venues in the hospitality sector which have been especially hard-hit by the Covid-19 pandemic are able to provide these productive, flexible and local workspaces to employees. Bringing much needed demand back to the hospitality sector and providing an additional revenue stream in addition to upsell opportunities.

As of now there is no platform via which businesses can connect with hospitality venues sector to provide their employees with productive spaces to work remotely from.

Tally connects venues in the hospitality sector with businesses. Enabling the employees of those businesses to work remotely from venues close to their homes with all the amenities essential for productive work. And providing much needed demand for venues in the hospitality sector. Tally drives sustainability, in enabling employees to work close to their homes, drastically reducing pollution. Commuting generates 77.8 million tonnes of CO2 emissions annually in the UK.

With Tally, businesses purchase tokens for their employees. Employees search listed venues on Tally and book a space at their chosen local venue using their tokens. Venues receive notification of the booking and a flat fee depending on the amount of time booked for by the employee. Venues benefit from a flat fee and upsell opportunities.

For businesses, Tally increases employee productivity, reduces the cost of providing workspace and benefits to employees, and increases employee engagement.

For employees, Tally, increases productivity, benefit from refreshments provided by venues and eliminates inefficient commuting.

For venues, Tally boosts revenue with new revenue stream, provides upsell opportunities and publicity via site and social posts.

Launched last month, Tally has five employers (50+ employees) signed up and 22 venues listed on the platform, with a further 15 venues having agreed to be listed. [www.tallymarket.co.uk](http://www.tallymarket.co.uk)

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The total addressable market of Tally is huge and its potential to scale, vast. As of 2019, there are approximately 100,000 hospitality venues in the UK. All of which could be listed on Tally to boost demand and revenue. There are approximately 1.4 million businesses in the UK with employees and need a flexible, remote working solution for their employees. These businesses employ 23 million individuals and have a combined annual turnover of £3,845 billion.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RESOLV DISPUTE MANAGEMENT LIMITED	Post Covid-19, isolation compatible, solution to support access to legal consultation for disabled and infirm individuals and carers	£99,794	£99,794

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 enable lawyer & mediators to provide services to elderly & cognitively impaired clients.\*\***

\* Mediation and the practice of law is evolving. Implications of COVID19 have emphasized restrictions of operating a functional practice, lawyers and legal professionals have the challenges of maintaining adequate regulatory and compliance standards when they engage with their clients, in an efficient and cost effective manner. Lack of consolidated tools and apps on one platform has particularly impacted the disabled and elderly clients in need of legal assistance during the pandemic. Lawyers have expressed difficulties in being able to assist their clients with moderate and severe cognitive impairment, along with their impaired clients' assigned attorneys, over online meetings as they with their more enabled counterpart clients.

\* RESOLV is a SaaS (Software as a service) platform aims to provide seamless and remote access to Online Dispute Resolution services to lawyers, mediators and law firms. Services provided on RESOLV facilitates end-to-end mediation sessions through video meetings, which are encrypted and transcribed. We aim to provide our subscribing lawyers with all tools needed during and after a mediation process on one consolidated platform. Our core aim being to equip legal professionals to provide seamless online legal services to all their clients whether they are enabled or suffering from any form of cognitive impairment, along with their assisting personal care attorneys.

\* Engaging in a mediation session through RESOLV means that even if a legal matter is not resolved the first time, the data gathered on the platform will enable lawyers to easily regenerate any necessary documents required for subsequent processes, such as initiating submissions in court to further their client's instructions. This process not only consolidates various mediation workflow patterns onto one app, but also reduces costs and time a lawyer or a further referred legal professional would have to engage in, to further a client matter for resolution. The bi-product of a lawyer using this app will result in further efficiencies in court processes, encouraging better use of court time and judicial resources, as cases would be more simplified when they reach court.

**\*\*COVID - The Enabler:\*\***

\* Covid 19 has impacted people with disabilities suffering from cognitive impairment and elderly folk, who are exceptionally dependent on assistance of personal care attorneys to execute documents and access personal and financial assistance for basic needs.

\* RESOLV's Enabler will aid Personal Welfare and Financial Affairs Powers Attorney holders to act more efficiently in the best interests of their Donors. To ensure that legal practitioners can effectively and safely comply with the execution of documents that are necessary to help action the needs of clients with cognitive disabilities.

\* It will have a secure authentication process which will empower legal practitioners to have documents such as bank or building society accounts, bill payments , pension or benefits collections managed by helping attorneys to manage their donor's given instructions effectively. The Enabler module addition will aid clients with cognitive impairment and their attorneys long term as well as during the pandemic.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 BEEKEEPERS & HIVE LTD	beecard	£81,598	£81,598

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

beecard is the gift card dedicated to the children's activities market.

It offers grandparents, aunts, uncles and family friends the opportunity to give the gift of a vast choice children's activities to a special child in their life.

For years the only gift card options for those buying gifts for children have revolved around toys, games, and one-off experiences or days out. Never before has the potentially life-changing gift of a series of classes at a chosen activity been possible.

Traditionally, gifts for children's activities have been limited to purchasing vouchers for a specific provider, thus limiting the choice of the recipient to the one activity chosen. beecard changes this and allows someone to gift the choice of any participating activity provider, offering the parent or child recipient the chance to choose what they want to do.

beecard's dedicated app allows recipients to use our map-based search functionality to find activities local to them. They can find out about an activity within the app and when they have chosen what they want to do, our technology takes them through to the provider's website to book their space and pay using their beecard balance.

To date, we have integrated beecard with a single booking platform giving it access to 7% of the children's activity market. This integration has meant there are up to 1400 activity providers participating.

This project develops the technology that will enable beecard to integrate with every booking platform on the market. Such a development will open up the choice of activities within beecard to potentially 20,000 providers across the UK. If a customer has a beecard, the entire children's activity market will potentially be at their fingertips. This level of choice from a gift card in this sector has never been possible.

Alongside developing the technology to widen the number of providers who can accept beecard, this project will also develop a system to enable automation of payments to providers upon card redemption. This simplifies and reduces the timeframe from when a card is redeemed to the money being in the provider's bank account.

Opening up beecard in this manner helps us allow activity providers to tap into the gifting market like never before. This brings new potential customers and new revenue streams into the market at a time when recovery and growth in a post-COVID economy are essential.

Many businesses in this sector have been shut for long periods and have been devastated by the pandemic. Many of these businesses are small owner-operated organisations serving local communities, supporting local people. All are run with passion and dedication, mainly by women entrepreneurs. All of these things mean that it is incredibly important to assist this sector and help it generate new growth in the coming months and years. beecard does this in a new, innovative way that will help providers, parents and their children make the most of all the opportunities children's activities create.

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

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Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PAIROO LIMITED	Intelligent Matching Algorithm (Android)	£139,008	£98,696

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 undoubtedly had a significant impact on working patterns in the UK. Many people have lost their jobs, are on furlough, working from home or are working reduced hours. Flexible and temporary workers are likely to be key in the months ahead to assist in the UK economy's recovery.

Pairoo is a new, UK based technology start-up aiming to disrupt the temporary workforce market in the UK. Currently, Pairoo is targeting the Healthcare and Education markets with the aim of assisting the NHS and schools with their temporary workforce supply and management.

Pairoo's project is to develop a smart algorithm, based as a mobile application, which utilises many different data variables, including GPS location, to match urgent, short term temporary jobs to suitable candidates. The mobile app will provide users (clients and candidates) with visual icons to help in their environmental decision making. For example, green icons will highlight nearby candidates/clients and this will drive behaviour towards environmentally-friendly decisions.

Pairoo's mobile app will deliver significant improvements in efficiency, to both clients and candidates, with smart algorithms and notifications resulting in better matching, reduced travel times and, ultimately, a more convenient service with faster delivery and lower costs.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MANGOHAMMOCK LTD	CrewRoom: Reutilising unused corporate assets via an ai-driven platform	£99,860	£99,860

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 conducts experimental research into an artificial intelligence-driven platform to re-sell and sub-let corporate fixed assets such as office and storage space or unused hotel bookings. It will create substantial value for the public by reducing "corporate capital waste" and give organisations a flexible way to react to volatile markets and their changing demands. Initially, it will focus on an industry that has been hit especially hard by COVID-19: Airlines.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NOT USUAL LIMITED	B.Local - Rewards and Recognition for Boosting Your Local Economy	£99,888	£99,888

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 has been detrimental to local economies and there is a need for innovative ways to stimulate economic recovery. An industry particularly hard hit by the pandemic is hospitality. The impact of Eat Out To Help Out vouchers has been largely positive. There is currently no way for those making a positive difference to the local economy to:

- a) Set goals and measure the impact of their personal local actions;
- b) See how they impact the bigger picture;
- c) Be recognised and rewarded for their actions in supporting the local economy.
- d) Continue to support the local economy with an Eat Out to Help Out Scheme without Government expense.

B.Local involves the development of an app and web-based solution to enable businesses, employees, local authorities, and hospitality businesses to come together in a circular economy. Each benefitting the other:

- \* Businesses can help boost their culture and retain talent cost-effectively with access to non-cash vouchers as trivial benefits and the ability to discount the purchase of digital non-cash vouchers with earned credits. Non-cash vouchers can be redeemed in local hospitality venues, so employees can enjoy more local experiences.
- \* Employees benefit from wellbeing and cost reduction of leisure experiences.
- \* Venues can benefit from increased revenue, in addition to new revenue streams as they earn revenue from the businesses that discover B.Local from their venue.
- \* Local authorities benefit from engagement with local businesses, employees, and hospitality in supporting the local economy.
- \* Following the success of the Eat Out to Help Out Programme, develop a digital solution to engage employers and hospitality venues to continue with a sustainable model without the need for government intervention.

Our project is innovative as it using Geolocation and QR Codes to geofence local authority areas to help local authorities to build a picture of habits and what further incentives can be introduced to boost the local economy.

The feasibility of the project is based on the work we have conducted in the Wakefield District since 2018\ . This activity was halted by the hospitality lockdown. Innovate UK funding will enable us to take what we have learned, create a scalable solution that is an invaluable tool for local authorities, local businesses, employees, and measuring the impact on local economies. Helping to speed up local economic recovery.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOODSTEPS LTD	Foodsteps Sustainability Labels	£88,847	£88,847

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 background and outline\*\*** -- Food plays a major role in the UK's impact on the environment, with current food consumption patterns estimated to contribute 19-29% of global greenhouse gas emissions. However, there is currently no simple and transparent way for food providers to measure and communicate their carbon footprint in the UK. Similarly, consumers are hungry for reliable information on the carbon footprint of the food they purchase, with the availability of such information lagging behind advances in the data. Foodsteps is building upon our cutting-edge research undertaken at the University of Cambridge to streamline food-specific carbon footprint services into a single online tool. We will be providing leading data on the carbon footprint of food, which climate-conscious food providers can use to communicate with consumers via carbon footprint labels.

Our project involves the development of a brand-new food environmental impacts platform -- the **\*\*Foodsteps Platform\*\*** -- which allows food providers to calculate and track the carbon footprint (as well as land use, water use and pollution impacts) of their food. The platform then allows food providers automatic access to the Foodsteps Carbon Footprint Label, which they can display on or next to their food products. The Foodsteps Carbon Labels are printed with a QR code, which links to FoodStory -- a unique webpage for each food product where food providers can provide transparent information on the "source", "transportation", "packaging" and "waste" of the products. FoodStory also contains detailed information about the environmental impact calculation for each product, giving all the necessary transparency for consumers to understand how such impacts were assessed. All the information on FoodStory is reviewed and verified by Foodsteps, giving customers confidence in the supply-chain transparency and impact labels. The platform will be based upon our successfully trialled methodology, with label trials going ahead at one of the UK's leading universities during development.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AIMHI EDUCATION LTD	Interactivity tools for the present and future development of engaging live, accessible online education	£99,136	£99,136

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 allows AimHi to develop a new, resilient, educational platform, to make world-class, live, learning available to a broader audience than ever before. It will allow for anyone with an internet connection and smartphone to access inspiring, interactive education, and engage with charismatic teachers, experts, and role models.

AimHi's platform currently provides leading online curriculum support, giving students the opportunity to interact in ways not possible in a classroom, and allowing them to consider alternative and complementary perspectives on the key learning areas of Key Stage 3+.

AimHi's project further develops innovative interactivity tools and will allow syllabus-based tutorials to be delivered by some of the UK's most sought-after tutors at an exceptionally low cost. Tutorials will engage multiple students simultaneously, with prices set dependent on the number of students in each class.

The project's proposed interactivity tools will be AI-powered and smartphone-optimised, ensuring a tailored and engaging experience for all students, regardless of gender, location, ability, age, wealth or health.

In addition to high-quality, low-cost tutoring, AimHi will also continue to use its platform to run live, interactive, online lessons led by inspiring individuals (such as Dr Jane Goodall). Alongside creating unprecedented global access to meaningful engagement with role models, these lessons have a broader focus on equipping students with the problem-solving skills necessary to tackle the challenges of our changing world, and will continue to help to prepare young people for the jobs of tomorrow.

AimHi's improved interactivity tools will allow teachers and students to approach learning from angles currently not possible within the traditional classroom set-up.

The flexibility and innovations offered by AimHi will stretch and redefine the definitions of 'school', 'student', 'teacher', 'classroom' and 'work', enabling everybody to find a way to engage with and become passionate about non-traditional and non-typical topics and career paths.

AimHi represents a proven solution to making online learning effective (over 90% of students engage with lessons from start to finish) in a way that current online classrooms fail to achieve. AimHi empowers students to think critically, to act on the basis of evidence and to be wiser and kinder stewards of our biosphere. Students will be able to access more expansive learning communities than what standard online classrooms or tutor services are currently capable of offering, as well as being able to supplement in-school learning environments.

AimHi's educational platform is being developed not only to deliver world-class tuition during exceptional circumstances, but to lead the way in the rapidly growing world of online learning experiences. Our improved platform will provide a resilient and flexible basis for global hybrid learning and will remain relevant and fundamental to future learning scenarios, as educational strategies expand and adapt to changing societal conditions. Most importantly, the affordable model will address many of the inequalities in access to education that have been exacerbated by the COVID-19 pandemic.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPTIMA PROJECTS LTD	Optima Electric Boats	£98,134	£98,134

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

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

## Project description - provided by applicants

Optima Projects are developing a range of electric cruising boats for the leisure marine market and this project represents a major step forward in that development. The first boat in the range will be 11m long and capable of long-distance coastal and offshore passages. The boats are based on a novel and innovative hull-form to reduce resistance while allowing the vessel to operate above normal hull displacement speeds with very low power consumption and very high efficiency and comfort. This will make cruising under electric battery power viable with dramatic reductions in environmental impact and running costs. Passages will also be more enjoyable and sociable, with reduced noise, accelerations, and pollution.

The boat will include a very efficient and lightweight FRP composite structure incorporating natural fibre reinforcements and bio-based resin systems. The structure will be highly optimised using computer modelling and finite element analysis to minimise weight, maximise efficiency and reduce cost.

This project will include detailed design, analysis and testing work and will represent a major advance in sustainability in the marine industry. The cost of ownership will be significantly lower than a comparable conventional powerboat and will encourage engagement from a wider and more diverse customer base.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EALAX LTD	FRAUDSIM: A fraud control optimisation tool for readjustment to the new normal	£99,991	£99,991

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 importance for our society to reduce criminal profit and deter future generations from finding financial crime as a rewarding lifestyle is one of the key aspects that we are envisioning to contribute with this project. Criminals leave a fingerprint of their activity in the financial institutions on their financial records. Unfortunately, financial data is very constrained by customer privacy regulations such as GDPR. This hampers the possibility of collaboration between different stakeholders in financial problems such as optimising fraud controls tools and reducing financial crime. Solutions based on Machine Learning (ML) are starting to arise, but the quality data required to properly train the models is not available.

With the current COVID-19 pandemic, crime has evolved to a new normal and so has the behaviour of non-fraudulent people. Evidence of this is the rise in digital ecommerce and the types of fraud where there is no presence of the card holder. These problems require new ways to rapidly adjust to this new normal.

We address these problems using advanced financial simulation. Our innovation is called FRAUDSIM, and it enables enhanced and rapid deployment of machine learning for financial crime analytics. Our solution creates digital synthetic twins of financial data especially enriched for improving machine learning fraud controls. FRAUDSIM captures the fraud dynamics and combines them into tailor-made scenarios that explore diverse threats that financial organisations are exposed. Our simulator outputs augmented non-confidential financial synthetic data, resulting in trustable datasets ready-to-use for solution providers of advanced financial crime analytics. With FRAUDSIM, we will be able to rapidly develop, benchmark and compare advanced solutions based on machine learning across the industry.

These enriched synthetic datasets are the new oil for ML engines to tackle not only the fraud control optimisation problem, but also a diverse set of complex problems currently present in the interaction between government regulators, financial firms, academia and third-party providers.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AGSENZE LTD	CowVid: Streamlining 3rd party remote monitoring of dairy farms to mitigate travel restrictions	£90,136	£90,136

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 and pilot a cloud-based platform that gives inspection bodies access to automated body condition scoring and video information on individual animals, enabling a more thorough welfare inspection without the need for a farm visit. Because of lockdown measures, on-farm inspections can not be implemented and certification bodies such as Red Tractor have enacted some pilot remote inspections, which do not give the same level of animal welfare information as a physical inspection. In addition lockdown measures have caused a backlog of both inspections and training for new inspectors. This technology will augment existing virtual inspection protocols, help to reduce travel time for inspectors, thus helping to reduce the inspection backlog. Making the automated monitoring data available as part of online courses, enhances training modules and enables a greater part of the training to take place online, thus reducing the training backlog. Insurance companies report that the pandemic has created challenges in data gathering for risk management due to a greater degree of uncertainty and a lack of up-to-date information. The envisaged system gives insurance companies access to detailed farm data enabling a greater depth of information on the dairy industry that helps them manage risk during this period of unprecedented uncertainty.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RADIUS TECH FASHION SERVICES LTD	Fashion Business Guide Platform with Artificial Intelligence	£97,564	£97,564

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

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



## Project description - provided by applicants

Radius Tech Fashion Services is an artificial intelligence (AI) company based in London with a team of experts from start-up, data science, retail and marketing domains. The Radius team has developed a series of AI algorithms to automate strategic planning and execution of commercial real estate operations. Radius AI identifies market dynamics of a defined area and provides businesses with tools to attain/retain customers using data-driven strategies.

Radius focuses on improving its AI technology to maximize the offered value to fashion SMEs. Due to Covid-19, three-out-of-four SME owners have expressed their concerns on the catastrophic impacts of this crisis on the economy and their businesses. Protecting profitability and growth of SMEs are vital for the economy. In 2019, 99.5% of businesses in retail and hospitality were SMEs and accounted for 81% of industry employment and 79% of turnover [Statista]. Digital transformation is therefore critical for improving the resilience and agility of SMEs.

With this project, Radius will launch a web platform that is powered by its improved AI technology. This platform will make the advancements of artificial intelligence technology much more accessible and affordable for SMEs, enabling them to adopt resilient and agile business models. The innovation resides in the capacity to collect and process fragmented, multi-layered, complex data points and the use of AI for creating a holistic understanding of customer and market behaviours. Data-driven commercial strategies drive increased revenue, customer satisfaction and profitability. Understanding consumer profiles and market dynamics is crucial to successfully manage a business and drive sales. Therefore, with this project, Radius team will provide a comprehensive tool that allows SMEs to grow their businesses and expand into new markets.

The platform will embody features that will help fashion SMEs to minimize waste and inherent harmful impact on the environment. Additionally, to stand against any data breaches, monopolies or unethical use, Radius will adopt best practices for accountability and ethics in all of their data efforts.

The main outcome of the project is a comprehensive web-based service that allows fashion SMEs to benefit from data-driven strategies. The project will focus on delivering the required elements of the comprehensive service, which includes advanced AI algorithms, datasets and a stand-alone web platform.

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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	£99,932	£99,932

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
REVIVE ECO LTD.	Used Coffee Grounds Valorisation Project.	£100,000	£100,000

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

The hospitality sector has been one of the hardest hit industries from COVID-19. Therefore, action is needed to help cafes and restaurants that have been damaged by the pandemic, and the resultant lockdown, to recover. UCGs cost the hospitality sector around £70m per year in waste management costs, with the vast majority ending up in landfill adding huge volumes of greenhouse gases to our atmosphere.

Revive Eco Ltd. (Revive) is a Glasgow based startup, on a mission to maximise the value of materials previously thought of as waste. We collect used coffee grounds (UCGs) from across Scotland, saving our customers money on their waste management costs. UCGs contain a range of high-value triglycerides. Triglyceride derivatives are most often used in cosmetics as an emollient or an emulsifier. As an emollient, triglycerides help to enhance skin-hydration by sealing in the skin's moisture and reducing evaporation. Triglyceride derivatives emulsification properties serve as a thickening agent for skincare products. This allows ingredients with differing solubility to form a more consistent solution. Overall, triglyceride derivatives are highly beneficial to infuse into personal care products as a way to provide better spreadability as well as alleviate skin dryness. Unfortunately, these ingredients are normally sourced from environmentally questionable sources such as palm oil. Palm oil's carbon footprint and its association with deforestation have made it a morally questionable product to use for some time. However, with a huge increase in ethical consumerism and anti-palm oil campaigns, it is now becoming economically questionable as well.

We, therefore, can provide these industries with a sustainable and locally sourced alternative to ingredients that are currently receiving a lot of negative press. Then, from the residual material left over from our process, a soil conditioner product will be created making the process a truly zero-waste process.

We are at the end of a 18 month R&D project funded by Zero Waste Scotland, that allowed us to design and build the first stage of our processing technology. This allows us to dry the UCGs and extract volatile compounds from them in an extremely cost-effective and energy-efficient manner. This has allowed us to establish a small pilot processing facility in Glasgow.

The aim of the proposed project is to develop a further process to extract, separate and purify the valuable triglycerides that are normally sourced from environmentally questionable sources, from UCGs. Funding will create four highly skilled jobs, bringing in a wealth of knowledge and experience that will catalyse our development work and allow us to commercialise more quickly and efficiently. It will allow us to develop a truly impactful and innovative new business model one that sees us extracting the absolute maximum value from what was previously viewed as a waste.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DUODRIVE LIMITED	Motodrivetrain - Zero-Carbon Marine Propulsion for Small Ships	£112,010	£99,689

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

Maritime freight and passenger transport is essential but the current mode of energy utilisation is not sustainable. The resulting air pollution (e.g. smoke / particle matter, NO<sub>x</sub>, SO<sub>x</sub>) from marine diesel engines affects coastal regions around port cities and busy waterways where there is now a pressing need to decarbonize to meet regulatory and local urban air quality requirements, apart from GHG emissions.

The International Maritime Organisation has shown that emissions from shipping jumped 70% since 1990 and global shipping emissions may reach 17% by 2050 (European parliament report). UK Shipping contributes annually 6 million tons of CO<sub>2</sub>e (Clean Maritime Plan DfT July 2019) and the resulting pollution contributes annually to 50,000 premature deaths in Europe costing society more than £50 billion (Transport & Environment NGO). In UK small ships vastly outnumber large marine vessels and collectively create far more pollution being on a par with that from the Heavy Goods Vehicle population.

To address environmental concerns, cuts to particulate/NO<sub>x</sub>/SO<sub>x</sub> pollution is urgently needed for maritime transportation. Amongst all possible solutions to clean transportation, electrification seems most promising. The Electric Revolution when applied to the Marine Sector could eliminate carbon emissions but innovation is needed to overcome the technological challenges so that the sector can progress. This project is aimed at providing an innovative technological solution to marine electrification.

In the sub-8m length boat market there are already a number of UK, EU and International brands competing with mostly electric outboards with single propellers powered by batteries capable of low-modest speeds. For the larger vessels, unless a diesel engine is simply replaced by an electric motor, there are very few cost-effective, innovative yet efficient ideas. There are prototype external propulsion packages (aka POD) designs with innovative but complex electric driven propeller driven water-jet solutions well-known for high efficiency at high speed (above 25-30 knots) but with poor efficiency at any slower speeds. With equivalent power sizes in range 110 - 220 kW they forecast perhaps a \$20 billion market by 2027\.

The Motodrivetrain(r) proposed meets the need for a simple concept, highly efficient electric marine propulsion cartridge unit for larger vessels (over 12m in length) which can also be retrofitted with Duodrive's TorqueFlange(tm) to existing fleets as well as to new builds without any design change otherwise demanded by other ePOD drives. The propulsion market for the Marine Electric Revolution (MER) will grow globally by \$1.77 billion during 2020-2024\.

This experimental development project will focus on this totally disruptive approach built on the long history of the superior efficiency of contra-rotating propellers over both single propeller and waterjet. Using Computational Fluid Dynamics optimisation the best propeller configuration will be built & arranged on a custom rig for outdoor COVID-19 appropriate testing. At the same time, a project partner will determine the ideal design for the final product with "power saving" features. The concept will dramatically increase the electric drive propulsion efficiency for conventional as well as autonomous surface vessels (ASV) dramatically extending mission endurance and improving battery life.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CLAIRVAUX LTD	Heavy Vehicle Twin Motor e-Axle - HeavyVeX	£99,782	£99,782

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

Heavy Duty Electric Vehicles are a vital element in the decarbonisation of freight and in achieving Net Zero 2050 targets. Clairvaux Ltd is fully committed to providing electrification solutions to all aspects of semi-trailer operation in support of these objectives.

Clairvaux Ltd completed an IDP15 Feasibility Study of an electrified semi-trailer. Project Zeraud designed a patented Chariot to provide electric propulsion on the semi-trailer, allowing a standard 4x2 tractor unit to operate with Zero Emissions when coupled. The resulting design -- Zeraud -- requires an electric drive axle capable of operation between 10-tonnes and 13-tonnes. Such axles are under development and at pre-production standards with a small number of Tier 1 suppliers, but none has a twin motor design such as proposed here. The reason for a twin motor design is to allow the wheels to be driven in opposite directions at the same time to assist with steering of the trailer when not coupled to a tractor unit. Observation of tracked vehicles will show them performing a 'neutral turn' - turning on the spot with no lateral or transverse travel. That effect will be reproduced on the Chariot using this design of e-Axle.

Clairvaux is working through a 3-year trailer electrification programme in order to have an automatically guided trailer, capable of unaccompanied movement within a distribution centre and in preparation for autonomous operation on public highways.

Because trailers do not yet commonly have drive systems, nor do they commonly have controlled steering systems that can operate when uncoupled from a tractor unit. These systems need to be developed, which is the objective of this project.

This project will produce a working Mule e-Axle - not a production intent prototype, but a fully functioning and representative sample, suitable for test and development work.

The Mule will be fitted with strain gauges to check it is mechanically and structurally sound when towed by a tractor unit. Cooling is essential for motors and inverters, lubrication and cooling for the transmissions. The Mule will seek to integrate these circuits into the assembly to avoid the need for external connections to radiators etc. Cooling fins are necessarily thin and have the potential to be fragile, so conducting road load measurement for detailed stress analysis provides an optimised route to a reliable design.

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GROUNDSURE LIMITED	Groundscreen Brownfield Risk Calculator	£96,834	£96,834

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 the significant disruption to the construction and property sector, as well as having significant financial impacts on local authority revenues. Groundscreen is a cloud-based digital planning tool designed to identify and calculate abnormal ground conditions and clean-up costs prior to the detailed assessment and development of a site. It is intended to drive development on previously developed land and remove the uncertainties associated with assessing the viability of post-industrial brownfield land. Local authorities, planners, developers and purchasers of all sizes will be able to utilise this tool to have sight of issues before they derail a project, and to prioritise and target land disposal and further action as required.

The tool is integrated within a Geographical Information System (GIS) and will be able to deliver relative risk scores and quantitative assessments of associated costs for inputs ranging from single sites to large UK-wide land holding portfolios. The outputs provide assessments of a) soil and groundwater contamination and b) geotechnical (soil, rock and mining) hazards. It is based on regional bespoke tools created by the British Geological Survey (BGS) for selected local authorities in 2019, and the national project is the result of collaboration between Groundsure and BGS.

It is intended that the tool will be useful in the following areas

- \* Landholder portfolio assessment
- \* Prioritisation of brownfield land for disposal by local authorities
- \* Developer planning
- \* Individual site-level assessment

This tool is not intended to replace the necessary environmental risk assessments of sites for development, but instead to help with the prioritisation and evaluation of sites in a complementary manner. It will reduce uncertainties and allow for efficient allocation of resources, whilst facilitating the sustainable reuse of brownfield land.

Given the UK government's targets for prioritising brownfield land for the development of up to 300,000 new homes a year, it is vital that we create tools to break down the barriers to the utilisation of 'problematic' land. This tool uses publicly available datasets available for England and Wales to calculate its output, so there are no regional barriers to its deployment. The failure to appreciate the scale and cost of abnormal ground conditions can easily derail development even in the most high value projects. This project is intended to ensure the flow of land back into beneficial use, reducing project risk and enabling the 'brownfield first' policy for land reuse.

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SEEDS CAPITAL LIMITED	Development of novel graphene based inks to replace toxic and scarce materials used in thin film photovoltaics	£98,390	£98,390

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 pandemic saw energy demands fall dramatically as lockdowns were enforced across the world. In the UK, low power prices amid decreased demand due to lockdown measures, made it increasingly unprofitable to run coal plants resulting in no electricity being generated from coal for the first time since the 1800s. Fortunately, during this time Britain was able to generate its power from renewable energy sources. However, in poorer countries, the COVID-19 pandemic has highlighted the deep inequalities in terms of access to modern, affordable and sustainable energy. Access to reliable energy is a lifeline, especially in the context of the COVID-19 crisis. It is essential not only for preventing and addressing the pandemic but also for accelerating the recovery and building back better by securing a more sustainable and resilient future for all.

This project addresses the need of generating affordable, low carbon energy that guarantees security of supply by developing a key enabling technology to accelerate emerging solar cells, specifically 2nd and 3rd generation thin film photovoltaics (TFPV). These have the greatest potential to reduce cost and carbon emissions from the manufacturing process beyond the current State-of-the-Art (SOTA) first generation silicon-wafer photovoltaics (SPV). The challenge, however, is to vastly improve (1) the efficiency and (2) the stability of TFPV to compete with SPV and (3) replace toxic and scarce earth metals used in the manufacture of TFPV which prevent their contribution to security of supply.

This project will address the challenge by developing a novel carbon nano-structure which has the potential to absorb a broader spectrum of light, to demonstrate an improvement on the state-of-the-art by increasing the efficiency of metallic TFPV beyond 30%. This is intended to overcome the challenge of manufacturing higher efficiency thin film photovoltaics (TFPV), with a higher stability for a longer product life and by using renewable and abundant materials to out-compete 1st generation silicon wafer photovoltaics (SPV). TFPV uses more efficient manufacturing processes than SPV however current State-of-the-art TFPV use unsustainable materials (toxic or scarce) and have poorer stability. This project will look to replace toxic or scarce materials used in TFPV to deliver organic, energy-efficient, printable solar inks that can be used in the active layer of TFPV, providing for flexible and scalable solutions to our energy needs, making the power system more resilient in the face of crisis and presenting the opportunity to develop a truly distributive energy system to generate and store power at or near where it will be used. This will vastly improve on the market penetration of renewable energy, due to the ability to integrate the technology onto an array of surfaces across multiple markets.

This project is the first part of a wider programme to deliver a novel semi-conducting ink that uses the carbon nano-structures to maximise conversion of light to power. The TFPV prototype stages will be developed at CPI's Graphene, Formulation and Printable Electronics Centres to deliver a step change performance in flexible, lightweight solar cells. This promises low cost manufacturing with rapid scale-up.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SALUPONT CONSULTING LTD	Enabling multiple reprocessing of filtering face-piece respirator (FFR) masks as personal protective equipment (PPE) using a high intensity UV-C radiation portable medical device	£99,513	£99,513

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 need to protect healthcare staff and other vulnerable groups from respiratory infection and to promote business recovery. Personal protective equipment (PPE), notably disposable, single-user, filtering face-piece respirators (FFRs) are required in unprecedented quantities. Due to the ongoing pandemic, healthcare businesses such as hospitals, primary care practices, dental and residential care homes, are facing disruption, a significantly increased cost burden and a sustained inadequate supply of these protective face masks. As a result, care givers and their patients are at increased risk of contracting and spreading COVID-19.

The WHO has estimated that 89 million FFRs are needed every month in response to the pandemic and worldwide production needs to increase by at least 100 fold. The limited stocks available on the world market are provoking price-inflation and an emergent shortage of medical grade FFRs. In addition, the substantial quantity of 'use once and throw away' FFRs being discarded is creating a mountain of medical waste for incineration that presents a serious and growing threat to the environment.

The cyclic sanitisation of 'single-user' FFRs to enable re-use by the same wearer is an attractive option to help manage the limited existing stock and dramatically reduce the quantity of FFRs being discarded and the subsequent damage to the environment. Current options utilise steam-sterilisation, hydrogen peroxide vapour, gamma irradiation or ultraviolet germicidal irradiation (UVGI), but all have significant shortfalls including FFR deformation alongside significant cost, personnel and time overheads.

We propose a rapidly available response to the crisis in the form of a low-cost medical device that will enable the wearer to decontaminate their 'single-user' FFRs quickly and easily using a device situated in close proximity to the point-of-use. The purpose is to simplify and speed up the sanitisation process to prolong the lifespan of each facemask using a highly effective process that does not damage their functional integrity.

The device is a 'clamshell' sanitiser that uses the ultraviolet (UV)-C waveband, which is known to kill microbes. It consists of a hand-transportable unit that fully encloses a single FFR in a highly reflective environment during each treatment cycle. Once the intensity of UV-C radiation and exposure time required to kill any contaminating microbes has been achieved, the device automatically switches off and opens. The innovation builds on many years of experience developing monolithic selectively metallised polymer structures.

Each device will have an in-use lifecycle of 1000 hours. The FFR sanitisation cycle will take less than 10 minutes enabling each device to save the use and disposal of up to 12,000 FFRs per device. This will avoid the environmental impact of adding 12,000 FFRs to the growing mountain of medical waste that requires disposal by incineration. Healthcare workers and other 'at risk' groups could be supplied with the device, involving the sale of multiple millions of units. The successful development and commercialisation of the sanitiser would generate UK employment in manufacturing (plastic injection, assembly etc.), sales, distribution and product support.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 Factory Ltd	Digital Gamification for Business as an Innovative SaaS	£98,964	£98,964

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

This project takes established proven experiential learning tools, which have been digitalised to a cloud based suite of business games as Software as a Service (SaaS) making it available to an increasingly distributed workforce.

The experiential gamification titles help organisations, teams and individuals deliver organisational change in a safe and controlled manner, saving time and money, managing the threats inherent in the change process and ultimately improving productivity through discretionary effort.

Our experiential learning tools which we trademark as Business Process Mirrors, reflect organisational complexities and the need to balance personal and organisation goals which will be increasingly important in a post COVID era.

COVID-19 and lockdown has seen a rise in those working remotely to over 54%, many, for the first time. While lockdown may be temporary, the increase in home working of 27% over the last decade suggests we are experiencing an acceleration to the new normal. This increases the need for teams to communicate and collaborate effectively while working remotely. By simulating organisational issues around remote working, our digital experiential tools mirror real life enabling teams, leaders and individuals to reflect on and modify their own behaviour and practice. Without such new, impactful and innovative tools, organisations, teams and individuals will struggle to maintain efficiency, making them less competitive in a global workplace, therefore less able to motivate and retain employees.

By developing this virtual solution to address the challenges facing many sectors and businesses, we pivot from analogue face to face delivery, to digital. In so doing, we replace physical tools, with a virtual ones.

This digitalised gamification process will ensure that the benefits derived from playing our gamification will be experienced by a much wider market.

While much of the focus through lockdown has been on tools such as Zoom and MS Teams, there has been insufficient attention paid to the human side of collaboration. We identify 3 key stakeholders for our Digitalised experiential gamification library:

Organisational leaders,

Teams

Individual employees.

Our suite of digital experiential gamification clearly illustrates how leaders need to adapt their style to the new working norms and what they need to do to get the most from their employees. Teams will learn how to collaborate more effectively when working remotely, identifying a clarity of purpose required to make any strategy work, unifying the teams in a clear direction. While individuals, separated from their regular routine and their work community, discover the behaviours and processes they need to change, prosper and thrive in lockdown and beyond.

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Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MONILY SC LTD	Building Receipt rails to remove Paper receipts	£82,429	£82,429

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 business was started in 2018 because we saw the need for Receipts to go digital. As Data Scientists we could not understand why Banking Apps only showed the total value of the transactions but not the items found in the Receipt, why we had to send Paper Receipts for our business expenses and why Receipts were so difficult to find when we needed to return goods or exercise our product warranty. More compellingly, Paper Receipts have resulted in are made from toxic thermal paper 50% of which cannot be recycled, the UK uses 11.2Bn receipts a year.

We are building a fully digitalized receipt platform where Merchants, Banks and Customers can digitise Receipts and put privacy first. We have divided the problem into two, On and Offline Receipts.

Solving the first part, we built a Machine Learning API that executes on a smartphone to extract email receipts for Online purchases and matches them to Bank transactions, all securely on the device. The ML algorithms have been developed by analyzing over 30million emails of training data. This has helped us distinguish between the various types of Email; Spam, Phishing, Promotional, Personal, and Receipts.

This project will build the API infrastructure to support the digitization of Offline Receipts using the common 'Standards' found in Email receipts, bringing the same uniformity of information we had in Paper receipts. Merchants will be able to add the service to the Payment Service Provider (Square, Sum up or iZettle) and/or EPOS (Diebold Nixdorf, EPOS Direct, etc) to send the receipt to the Issuer via a tokenized service, it will extract the data from the PSP/EPOS system (product names, transaction time and location, quantities and value-added tax held) and deliver it to the Issuing bank after it has been reconciled with the payment card used. The Receipt is then used to populate the transaction with the details of the basket of goods purchased. Opening up access to purchase history via a digital format has led to a wide range of opportunities for ecosystem players to build new services on top of the data.

The intrinsic benefit of delivering our native (Smartphone) Machine Learning coupled with the 'common standards' approach is its capability to scale globally without the traditional costs of exporting software (install, testing, etc).

The barriers to success in the market are being eroded in the changes in purchasing behaviour that is being affected today by Digitisation of money and COVID 19. As society moves away from Paper-based receipts and Cash payments, in part due to the pandemic, the need to adopt a new form of receipt is extremely important to protect purchase rights, ensure taxes are paid, and find efficiencies of processing expenses.

Monily has an excellent founding team backed by an experienced set of advisors from the industry. As a team, our core is Data and Engineering, but we also have great experience in delivering and selling technical products and 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TALENT EXCHANGER LTD	Conversation Artificial Intelligence Middleware for Digital Talent Platform	£95,000	£95,000

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

TalentExchanger is a UK based Digital Talent Sourcing Platform that is focused on disrupting the traditional methods to get business critical work done quickly by focusing on defining work packages then aligning the best gig workers in the UK to complete that work within a defined period of time while complying with local legislation. We will use innovative technologies such as Blockchain Ledger, AI Marketplaces and AI Chatbots to transform the traditional methods of work.

As we develop our platform to launch in April 2021 we are embarking on an ambitious project to build a Conversational Artificial Intelligence Middleware to drastically reduce the time it take clients to hire the best digital talent the UK has to offer.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Optomel Ltd	Enabling simple and highly secure authentication from printed polymer materials	£76,698	£76,698

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

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

## Project description - provided by applicants

Product authentication is of crucial importance in protecting consumers and manufacturers from the economic, health and social costs of counterfeit and falsified products. COVID-19 has seen increasing reports of criminals seeking to exploit PPE supplies and pharmaceuticals,\\* coupled with the dramatically increasing shift towards online retail and less secure supply chains.

Optomel is creating an innovative new approach to authentication in which mass produced printed features are activated by the LED flash on smartphones, creating a very simple but striking security image that is otherwise hidden. Over 80% of the UK population have a smartphone (ofcom.org.uk). This project will address the need for simple yet highly secure product authentication features that can be verified by the public.

Existing solutions, especially at the overt level - designed for public authentication - are becoming increasingly compromised and are able to be readily simulated enough to deceive the layperson.

This project will support creation of minimum viable product demonstrators (MVP), compatible with industry standard processing. It will showcase the technology, allowing Optomel to engage with customers, partners, and investors to help further commercialise the innovation.

Optomel is an SME (founded 2018) with dedicated lab and office facilities on the University of Southampton Science Park, with significant prior experience of the authentication technology market.

(\\*Source: EU Commission, European Anti-Fraud Office Press Release 13th May 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CO-OPTS LIMITED	Addressing COVID-19 Surge and professional staff shortages in NHS Mental Health Services	£99,034	£99,034

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 are looking at the steps required to build a hardware and software based service to record and summarise mental health therapy sessions. It's important for a number of reasons

- \* Mental Health trust CEOs expect COVID-19 to induce a significant surge in demand but services have been running close to 100% capacity during the lockdown due to the adoption of telehealth but there's no surplus capacity
- \* Current vacancy rates for medial personnel in the NHS mental trusts runs at 12.4%, double that for the rest of the NHS exacerbating the situation
- \* Less than 2m of the 12m a year in the UK with a diagnosable mental health condition get professional help which translates to a estimated cost to the UK of £100Bn (Chief medical officer NHS 2014)

Therapists currently spend 1½ -2 hours a day writing up their notes. Automating the generation of a summary immediately at the end of a session could save an hour a day. The therapist just needs to add their therapeutic notes to the automated summary rather than recall the full session.

The time saved could allow therapists to offer at least 1 extra session a day which would be a 20% boost in productivity for the NHS. Other benefits are the notes would be more consistent across sessions as unlike therapists, computers are more consistent than humans at boring tasks. They're not subject to the problems of poor human recall, cognitive bias and noise in human decision making. Our technology addresses the problems of privacy and confidentiality by giving control to the people in the room and not some remote cloud based solution with vulnerabilities to hackers. One of the more exciting possibilities is there may be therapeutic effects but that needs to be explored in a subsequent project.

This project is about extending the technology we have already developed and finding partners in the therapist community to collaborate with to test our assumptions and produce an experimental prototype and a project plan that could provide the basis for a custom designed device to provide a platform for mental health therapists and patients. That would offer the potential to revolutionise training, mental health practice and eventually to revolutionise mental health care the world over.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Armie - a system for professionally supported "stay-at-home" cosmetic facial rejuvenation therapies	£99,389	£99,389

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

Armie is the development of a new business-model and device-prototype to address negative Covid-19 impacts on cosmetic treatment-services.

The project will investigate potential for carbon-footprint reduction, from reduced travel and space requirements along-side a scalable business model with scope for world-wide franchise licensing.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OZONE CLEAN LIMITED	Restart	£99,956	£99,956

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

To enable the UK and World to return to a full and vibrant economy and to save lives, it is important that people have confidence to return to their usual activities like returning to their offices and using hotels and other facilities. In order to do this, people need to be reassured that the rooms are free of COVID19 (and other potentially lethal viruses and bacteria). OzoneClean traditionally design and manufacture Ozone sanitisation systems for the removal of odours from a range of environments. Within this project they will design and develop a new unit that is specifically tailored to the role of sanitising a range of surfaces and environments for COVID19.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INTELLIGENT AI LIMITED	Sustainability in Insurance Risk Surveying	£98,640	£98,640

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

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

Project description - provided by applicants

AI and Sustainability in Insurance Risk Surveying

Improving Insurance Risk Data Gathering.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ASPIRA AERIAL APPLICATIONS LIMITED	R&D to enhance drone flight technology to facilitate pollution reduction in urban areas	£99,990	£99,990

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 intent of this project is to further develop and prove safe and effective spraying of specific coatings and disinfectants using Aspira's bespoke Unmanned Aerial Vehicle (drone). These coatings can be used to protect and enhance buildings and structures, tackle air pollution including NOx and particulate matter and disinfect areas against infectious diseases including Covid-19.

Aspira is a leading technology company developing new, safer ways of maintaining and treating tall buildings and structures with specialist coatings by using a bespoke Drone, already approved by the Civil Aviation Authority (CAA) to fly and spray in close proximity to buildings. Our primary aim is to support the green agenda by applying coatings that actively clean buildings and reduce air pollution and particulate matter, as well as to mitigate the risks of working at height.

In particular we are focussing on the application of a specialist product, based on nano titanium technology with photo catalytic properties. A potentially game changing transparent material that when applied to exterior surfaces transforms the surface into a self-cleaning, pollution busting catalytic cleaner.

Reducing NOx using a titanium dioxide coating is not a new technology, it is the principle of catalytic converters. The restriction is the prohibitive cost of applying this to existing structures. Our drone will allow buildings to be treated quickly, effectively whilst minimising the cost where more traditional methods have failed

Our system and heavy lift spray drone has a unique capability of spraying both horizontally (forwards) and downwards, using both ground fed and onboard spray systems.

In order to achieve this goal our key objectives of the project are:

- \* To further develop and trial the anti-collision technology to minimise potential risk associated with flying in close proximity to buildings/structures whilst spraying.
- \* To establish and trial robust operating procedures to enable specific coatings to be effectively and safely sprayed using our drone.
- \* To maintain regulatory authorisation for enhanced spray operations to tackle air pollution.
- \* To further develop an effective spraying system to apply the pollution control product.
- \* To trial this using the establish relationship and proposed trials with Salford University School of Science, Engineering & Environment
- \* To understand and address any environmental impact, both positive and negative (where applicable).

We have proven this concept but we now need to refine the technology. This includes developing cutting edge flight stabilisation technology and effective spraying a variety of coatings to target dirty buildings and structures, air pollution including NOx and particulate matter. This could also be used to disinfect areas against COVID-19 and other infectious diseases.

Once developed this will enable initiatives such as the protection and aesthetic enhancement of city centres, significant reduction in NOx and particulate pollutants and potentially the spread of diseases such as coronavirus at a cost that is affordable and whilst reducing the risk of working at height.

Note: you can see all Innovate UK-funded projects 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 disruption caused by COVID-19 has significantly and adversely impacted our research and development for the technology required to make this a reality and this grant will enable us to achieve this goal.

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IBEX INNOVATIONS LTD	Improved efficiencies during health emergencies through enhanced visualisation of tubes and lines in the ITU setting	£80,893	£80,893

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 a huge increase in the number of hospital admissions for patients requiring care in intensive therapy/care units (ITU). These patients are often critically ill, immobile and in need of rapid interventions to assist with breathing, feeding and deployment of other health support systems. This influx has also highlighted how inadequate current mobile imaging systems are for the provision of care for these patients, with imaging for placement of tubes, lines and other devices often requiring repeats due to poor image quality. This increases the strain on an already stretched NHS resource pool and results in other services being reduced in a time of crisis.

IBEX Trueview is a novel physics-based X-ray imaging technology that has been demonstrated to enhance image quality in mobile chest X-rays (CXR) through accurate removal of the deleterious effects of scatter. This project will additionally demonstrate the potential for IBEX Trueview to improve the quality of tube and line imaging through application of unique "composition-guided post processing" (CGPP) methods.

This project will build upon the core CGPP algorithm to develop novel methods to enhance the visibility of lines and tubes whilst retaining high quality diagnostic images. The value of this for improved treatment in the ITU setting will be tested through an evaluation on consented patient images, and a health economics study which will determine its impact for the future sustainability of NHS ITU services during healthcare emergencies.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TWIN DYNAMICS LIMITED	Monitoring airborne transmission inside buildings using MF-BM	£98,294	£98,294

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Health England guidance on infection control attributes COVID-19 major transmission modes to respiratory droplets generated through coughing, sneezing and the contact with contaminated surfaces. Heavy droplets can fall out of airstream within a short distance, however relatively light droplets can travel further in air streams. Therefore, a key challenge is mapping droplet spread to identify contaminated surfaces or zones to minimise health and safety risk in building space. COVID-19 has had major impact on the Global Coworking Spaces Market. However, the market is expected to rise post pandemic due to more companies supporting remote working practices in the longer term. Therefore, it becomes imperative to take steps for efficiently managing increasing energy demand and the associated carbon footprint of the facilities hosting coworking spaces whilst supporting it to deliver a healthy and COVID -19 secure workplace. The step would ensure that it does not have a negative impact on the larger decarbonisation agenda.

Currently, no market solution offers to track droplet spreading and identify probable contaminated surfaces or zones, instead focussing on effectively managing an HVAC system to maintain fresh supply of airflow with an anticipation of diluting the virus particles inside the building. Some market providers offer AI powered video solutions for automated contact tracing once an active case is detected at the workplace. However, the solution relies heavily on extensive video surveillance and can potentially create privacy issues for the end-user.

Twin Dynamics Limited (TD) has developed a Multi-Fidelity Building Model (MF-BM) technology which offers near real-time airflow and thermal insight within the building space and is used to evaluate localised individual occupant thermal comfort and their productivity. This technical data can be used by the Facility Managers to create a balance between the ventilation inside the building space for optimal thermal comfort and energy cost, which leads to reduce carbon-footprint. MF-BM works by combining real-time pressure, flow rate and temperature sensors' data with high fidelity fluid dynamics simulations, using in-house developed code by TD. However, as airflow within building spaces acts as a respiratory droplet carrier, TD are keen to further develop the technology to predict near real-time droplet spread and its predicted settlement locations within building space.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MORE THAN NOW LTD	An experimental approach to motivation and team dynamics in the wake of Covid-19	£87,280	£74,188

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

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

## Project description - provided by applicants

### **\*\*Who we are\*\***

MoreThanNow is a behavioural research practice. We are one of the few commercial organisations conducting randomised controlled experiments in the UK workplace, supporting large organisations such as Transport for London, BT, Ericsson and Novartis make better, fairer decisions about people in recruitment, performance and promotion decisions.

### **\*\*The challenge\*\***

The COVID-19 pandemic has sent shockwaves through the HR community, as they respond to the seismic shifts in employee engagement caused by a rapid, and potentially long-term move towards virtual work. The traditional consultancy response has been to leap to answers, gambling with working lives with untested solutions. Our alternative approach - underpinned by empirical research - offers the opportunity to \_design and robustly evaluate cultural interventions with experimental evaluation.\_

Over the past three months, we've developed a diagnostic for self-determined motivation and psychological safety within teams. We are interested in these outcome measures as validated predictors of performance and mental wellbeing and as a means of identifying unique needs across already disadvantaged groups.

### **\*\*The idea - improving motivation and team dynamics using the randomised controlled experiment.\*\***

In this proposal, we introduce a novel process of organisational development through an experiment:

- \* We select 100 teams within 2 organisational partners.
- \* We run a baseline diagnostic survey, and randomise our sample into two groups:

1. Control
2. The Manager Capability Programme - a 3-week virtual training intervention.

- \* We run a post-intervention diagnostic, and provide a precise analysis of the impact of our interventions at the team level and between demographic groups (age, gender, ethnicity).

### **\*\*Why is this innovative?\***

MoreThanNow have been at the forefront of applied behavioural science in the workplace since 2016, and have restricted our experimental work to formal decision-making and single behavioural outcomes. The innovation in this proposal is not the validated diagnostic, nor the interventions, but the experimental approach to evaluation.

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

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



Testing culture-change interventions using the randomised controlled experimentation is innovative, novel, and starkly different from the advisory methods served by the employee engagement market. The output of the project will be a validated approach to organisational development in response to COVID-19.

**\*\*Why is this a good investment?\***

The employee engagement market is estimated at \$73.4bn and the leadership development market at \$336bn. Yet, the traditional service model fails to accurately isolate the impact of cultural interventions on meaningful outcomes. COVID-19 offers a much-needed opportunity for radical disruption.

MoreThanNow already has an established reputation and route to market in applied behavioural science - this proof of concept will allow us to develop that position by entering the vast employee engagement market.

Our aim is to create a process innovation that addresses the employee engagement problems posed by COVID-19. We'll help organisations support their teams and accelerate their economic recovery; using the Sustainable Innovation Funding to grow others as we grow our business in parallel.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OXI-TECH SOLUTIONS LIMITED	Sustainable Chemical Free Surface Disinfection	£91,066	£91,066

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

Oxi-Tech Solutions Ltd is developing an ozone based chemical free surface disinfection technology that will kill all known pathogens while remaining harmless to humans and animals. Its patent pending technology is based on producing desired levels of ozone "in situ" from potable tap water using their innovative electrode system.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RESCAYPE UK LTD	WATERSCAYPE-x - a solution to reduce diffuse pollution	£88,899	£88,899

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

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

## Project description - provided by applicants

m-PAM is a new, biodegradable, sustainable, EU regulated, soil flocculant product. manufactured by MIBA Rescaype AB, a Swedish company. The product is made specifically for the purpose of improving soil characteristics:

- reducing nitrates pollution through run-off;
- reducing carbon release through evaporation from soil into the atmosphere; and
- improving general soil structure to reduce flood damage and allow for quicker land recovery.

Rescaype UK Ltd ("RUK") is an independently owned and managed UK company and has the exclusive agreement to distribute m-PAM in the UK. RUK now wishes to independently research the potential for utilising the product in respect of being a possible fresh water pollution solution.

The project will include research and development for the installation protocols for m-PAM at field edges and measuring the impact of m-PAM on fresh-water pollution reduction.

The project will seek to evaluate m-PAM's impact as part of an overall multi-solution flood restraint system i.e. by m-PAM absorbing water reducing flow rate and then passing cleaner tail water off in an even manner (making it more manageable and useable as grey water).

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

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OVER-C LTD	Experimental development of an Incident Care Team Survivor Relationship Management system for Major Rail Incidents	£99,625	£99,625

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

In the event of a major rail or tram incident (such as a collision, derailment, fire or terrorist attack), the UK's Passenger Train Operating Companies (TOCs) provide humanitarian support to those directly and indirectly affected by the incident. This support is provided by 'Incident Care Teams' (ICTs) who are volunteers from each TOC who have been specially trained in how to respond to the needs of survivors in the hours and days following the incident. This is governed by a rail industry Approved Code of Practice and supported by a software system used by all TOCs.

Currently, the process and system to support this vital work is based on manual recording on paper and an obsolete Microsoft Access database.

Over-C are proposing to develop a **\*\*proactive\*\*** and **\*\*real-time Incident Care Team Survivor Relationship Management (ICTSRM)\*\*** system using digital technology, data and analytics that will replace the current Microsoft Access database system.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AGRISOUND LIMITED	PollenNet: Using pollinators to increase farm resilience	£79,274	£79,274

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 pandemic has exacerbated ongoing challenges with meeting pollination needs to ensure optimal crop yields in fruit trees and many other crops. Bee farmers have been unable to replenish bee populations as imports of bees from southern Europe were stopped in the lockdown. Innovations that make our pollination services more resilient are urgently needed. Agricultural management practices that support and increase the abundance of wild pollinators will reduce reliance on imported bees and result in more resilient crop production. A good understanding of pollinator ecology underpins management strategies to promote wild pollinators. However, insect biodiversity monitoring programmes have suffered setbacks as most of them rely on volunteer surveillance which were on hold during the lockdown.

To address these challenges, the PollenNet project will pilot an innovative new device for low-cost automated monitoring of pollinator abundance on fruit crops. Automated monitoring of pollinators is a step-change in agronomic management with continuous daily counting of insect visitation across a farm making information on pollinator visitation more accessible to farmers. With this information, farmers can make decisions about whether to purchase bees, move existing bee habitats and ideally, create habitats to encourage wild pollinators, reducing reliance on purchased bees. As such, implementation of automated pollination monitoring helps to mitigate challenges with ensuring sufficient information supports effective pollination and pollinator management presented by the covid-19 pandemic.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RSK ADAS LIMITED	Supporting the YEN Family through Covid-19 and beyond with an enhanced digital environment: Enhancing agricultural productivity, sustainability & profitability	£99,570	£99,570

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

UK Agriculture and the food system face challenges and opportunities from Covid-19 and Brexit, as well as climate change mitigation and adaptation. UK farming faces change; in coming years farmers must farm in a different climate, with net-zero emissions, with reducing and redirected subsidy payments, with possible post-Brexit trade tariffs, producing healthier foods, reliably, with raised soil health, protecting threatened species and the qualities of air and water, whilst remaining commercially viable. The blueprints to achieve this do not currently exist, and can only be developed by working together. Productivity in UK agriculture lags well behind our international competitors, in part due to our fragmented knowledge & innovation system and relative lack of collaboration and sharing of knowledge and data. Arable agriculture has been very poor at systematically monitoring its inputs, processes and outputs (eg yield), so despite huge variability with and between fields and farms there is limited understanding of 'what works' in improving performance. On top of this Covid-19 has disrupted the normal knowledge exchange mechanisms through the numerous events & meetings that would normally occur.

Since 2012 ADAS has pioneered new approaches to knowledge generation and exchange in agriculture through its 'Agronomics' and 'Yield Enhancement Networks (YEN)', working collaboratively to collect and share ideas and data, learning together. The YEN has been very successful in engaging farmers, advisors, industry and researchers to come together around a shared conceptual framework, make measurements of the things that matter, share their data, ideas and experience, derive insights and test decisions. A core principal is the sharing of relevant data to allow comparisons of performance against peers through benchmarking reports; this provides the incentive for growers to share their data, enabling insights to be drawn from analysis of the full dataset.

The YEN now engages with over 300 farms in the UK, plus more across Europe and in Canada, and has expanded to cover seven crops, with new initiatives continually being added. However, funding for the YENs has been piecemeal and limited, relying entirely on industry sponsorship, so there has so far been no large-scale investment in the digital infrastructure needed to properly support the data exchange, visualisations, reporting, and analysis, that would really enhance the experience for YEN users, and would make the YEN concept really scalable to a much broader audience at low cost, tackling any number of issues, not just yield, and enabling new business models for profitable and sustainable expansion of the YENs to be developed.

We propose here development of 'Dynamic Benchmarking' to enable growers to easily compare the performance of their systems against similar systems of their choosing. This functionality will be available to all YENs. We will develop YEN-Zero as a new YEN with a far broader remit, available to all growers to calculate and compare greenhouse gas (GHG) intensities of their crops across all their fields. This will drive the collation of a large shared data resource from which ADAS and the community will derive insights and future revenues, from UK and beyond.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LILHEADS LTD	Development of real-time engagement analytics to transform online learning experiences for 5-11 year olds	£99,890	£99,890

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

COVID-19 has seen unprecedented disruption to classroom-based education. Globally, over 91% of students have seen their learning disrupted, with national school closures in the majority of countries. Consequently, teaching is moving online, at an untested and unmatched scale. Even as schools plan to reopen, blended learning, which integrates traditional face-to-face/classroom teaching with online educational materials, is expected to become a permanent fixture of education post-COVID-19.

While online learning provides a scalable and cost-effective way to deliver quality education remotely, research also shows that self-guided online learning is characterised by lower learner engagement and higher drop-out rates than traditional face-to-face education, including amongst primary school children (de\_la\_Varre\_et\_al\_2014).

Student engagement has been shown to be a strong factor in academic success (Vytasek\_et\_al\_2020). Engaged students tend to be more enthusiastic, optimistic, curious, and interested (Hughes\_2012). They are able to focus more attention and energy on a task and demonstrate a higher degree of persistence when faced with more challenging tasks (Wang\_and\_Degol\_2014). Thus, student engagement is critical for successful learning (Appleton\_et\_al\_2008).

Concerningly, a recent survey of engagement during the UK national schools' closure found that about 29% of primary school children were not engaging with set work at all (NFER\_2020). In addition, pupil engagement with remote learning was lower in schools with the highest levels of deprivation (NFER\_2020). The Department for Education released £100M+ funding for remote learning to increase access to digital devices and 4G; however, pupils also require effective remote learning support including explicit guidance on how to manage their own learning and work independently (NFER\_2020).

Today, the rise of mobile technology and online learning provides an unparalleled opportunity to integrate real-time engagement analytics and provide adaptive learning based on personalised content, resource recommendations, and performance monitoring.

lilheads is a London-based micro-SME founded in September 2019 by serial entrepreneurs Ian Mihajlovic and Meir Biton. With Innovate UK support, we will develop an innovative real-time engagement analytics tool to transform online learning for primary school children. The majority of UK children own a smartphone by the age of ten (Ofcom\_2020). Below the age of 10, children are most likely to use a tablet to access the internet (Ofcom\_2020). Our unique and innovative tablet/smartphone-based solution scores learner engagement and will provide real-time personalised/adaptive learning based on emotion analytics.

Our project will deliver on the triple bottom line of three Ps: People, Planet, and Profit:

1. **People.** Our mission is to deliver a personalised tutor for every child. By delivering scalable personalised learning via a tablet/smartphone, we will improve quality education for all, including children from disadvantaged backgrounds.
2. **Planet.** Quality education is key to sustainable development. Remote learning can reduce travel-related carbon emissions, mitigating climate change.
3. **Profit.** Working with leading British and European educational publishers, our engagement analytics tool will be a value-added tool for adaptive learning, supporting digital educational publishers 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

By delivering scalable personalised remote learning for 5-11 year olds, we will increase resilience in the primary education sector in the face of future global disruption.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SIMOMICS LIMITED	Manufacturing Effluent Risk Modelling & Assessment System (MERMAS)	£99,824	£99,824

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 a cloud based risk modelling application to formalise, streamline and more accurately and transparently calculate environmental and antimicrobial resistance risks associated with discharging pharmaceutical manufacturing effluent into water catchments.

The mass production and consumption of pharmaceuticals has resulted in active pharmaceutical ingredients (APIs), antimicrobials and other chemical compounds being present in surface waters worldwide. Although the majority of APIs detected are predominantly due to the consumption and excretion of APIs from normal patient use, pharmaceutical manufacturing sites also contribute to the problem by emitting effluent, containing APIs, into neighbouring water catchments.

With pharmaceutical manufacturing scaling up production of APIs in response to the Covid-19 pandemic, rapid increases in production could create potential for localised 'hot spots' in the water catchment where effluent is released if it is not managed effectively. This has highlighted a need to assess and mitigate risks quickly, minimise environmental impact and prevent future adverse human health outcomes that could arise from increased APIs and chemical compounds in the environment, such as increased antimicrobial resistance (AMR) which could have dire consequences for future global human health.

While voluntary initiatives already exist for managing the risks of manufacturing emissions, for example the AMR Industry Alliance and Pharmaceutical Supply Chain Initiative (PSCI) safe level targets for antimicrobials, these initiatives lack standardisation across the industry and calculations lack some catchment specific context required to effectively predict and mitigate 'hot spots' around sites. Current calculations considering 'safe' levels of discharge from manufacturing sites don't accurately represent catchment complexities including background patient use in the catchment, temporal river flow data and the potential for multiple manufacturing sites discharging into one catchment. This could lead to localised API levels above the safe threshold, or falsely failed assessments. Furthermore, where safe limits are being requested of manufacturers, audits and calculations are not standardised and are ultimately hard to validate for correctness. Pharmaceutical companies often have many suppliers to audit and it is hard to ensure consistency and be confident in the accuracy of results.

With this project, Simomics will address the unique needs of Pharmaceutical manufacturing sites, developing a cloud-based risk prediction and mitigation application, modelling exposure, effects, risk and factors like treatability and re-use. Working in collaboration with subject matter experts at the University of York, this application will enable environmental risk assessors and site/contract management teams to more accurately understand and predict the environmental or AMR risk from effluent containing APIs including antimicrobials being re-used or released in a water catchment area, incorporating the context of background patient use and other sources of effluent including co-located sites.

The software solution we develop will enable pharmaceutical manufacturers to streamline, standardise, support and create more confidence in the accuracy of effluent ecotoxicology and AMR risk assessments, facilitate collaboration between closely located manufacturing sites and enable teams to consider water wastage and treatability while minimising environmental and AMR risk prior to production changes or even prior to site planning or manufacturing contract agreements.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ARCHANGEL IMAGING LTD.	Cerebella Remote Security Team (RST): Human-Machine Teaming Application with Remote Site Security Demo	£95,431	£95,431

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Cerebella Remote Security Team (RST) project integrates a set of best-in-class technologies (AI cameras, drones, IoT sensors, human staff coordination) to deliver an end-to-end deployable solution, using the Cerebella human-machine teaming platform.

Cerebella is a SaaS (Software as a Service) platform produced by Archangel Imaging Ltd, a RAI (Robotics & Artificial Intelligence) specialist based at Harwell Innovation Campus in Oxfordshire. This project will demonstrate how AI based systems incorporating the very latest smart-sensor technology, can provide real benefits to UK business safety and security, integrating the best UK technology into human workflows.

During the current COVID-19 crisis many business sites, such as technology and science parks that develop high value technology, are unattended for some or all of the time as staff are at home or otherwise unavailable to fulfil normal duties. An autonomous system combining robots and drones alongside human staff, responding to alerts AI powered cameras and IoT sensors, will demonstrate how cutting-edge RAI technology can increase business park safety and security. Robotics & Artificial Intelligence will be shown to reduce the likelihood of criminal activity including theft or disablement of expensive and difficult to replace specialist equipment.

The Cerebella Remote Security Team (RST) will be readily deployable to locations in the UK. Robotic systems are able to harvest power for rechargeable batteries and provide alert messages to site security staff to allow human intervention as needed. Deterrent modules comprised of audible and visual warnings may be incorporated to deter and prevent unauthorised access to areas that are off-limits or unsafe for general access. This technology has previously found use in systems designed to detect and protect wildlife in remote settings, to increase security and safety on rail networks and to prevent theft from unattended buildings.

Company description: Archangel Imaging is a SME (Small to Medium sized Enterprise) that specialises in advanced deployable machine vision systems, with power, communications and AI-enabled detection. Archangel Imaging is recognised for its expertise and focus on real, deployable capability for the end user. The company is an established supplier and partner of Network Rail, UK Ministry of Defence, several defence primes and specialist SMEs. The company is active in infrastructure security and safety monitoring (cable theft, rail safety and trespass prevention, oil and gas pipeline leakage detection etc.) with various bespoke equipment being deployed in the Middle East, South East Asia and Northern Europe. The company maintains capability in deployable devices (cameras and others), communications (various redundant means), visual AI and management user interfaces for command and control.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
HUMMING TECH LTD	Asset Hygiene Management	£98,356	£98,356

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

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Project description - provided by applicants

Solis Digital is an award winning Digital Consultancy focussed on bringing enterprise grade services and experience to small-to-medium sized businesses. The proposed project aims to provide a better approach to the management of hygiene across an organisation or business. It brings particular focus to return to work and long term sustainability following on from the impacts to UK business caused through the Covid pandemic.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
REINCUBATE LIMITED	Reincubate Camo for Android	£80,840	£80,840

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

Camo is a software application with a partner mobile app which allows a mobile phone camera to be used as a high quality webcam on a computer or laptop. The camera in even a 5 year old iPhone is still streets ahead from the webcams built into current laptops, and will even outperform a high quality external USB webcam.

Camo aims to provide a cross platform solution allowing the use of either iPhone or Android devices as the camera, which can then be paired with either Mac or Windows computers for the client application, supporting the full range of commercial video conferencing applications such as Zoom, Skype, Microsoft Teams, Cisco WebEx Teams and many more.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PURE MARINE GEN LTD	DUO Wave power unit for recharging autonomous underwater vehicles (AUVs)	£99,062	£99,062

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

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

Project description - provided by applicants

Pure Marine has developed and patented a new design for a wave energy converter, called DUO, which produces wave power from both the up and down, and the side to side, wave motions at the same time -- and this delivers a step change improvement in the economics of wave energy production.

The company is initially targeting markets for the supply of their wave energy technology to customers requiring a low cost, low carbon alternative to off-grid energy generation. Applications include power for marine observation systems, wave powered desalination systems and recharging autonomous underwater vehicles to extend their mission range. In the longer-term the DUO technology can be scaled up for deployment in large wave farms arrays for grid connected energy generation projects.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FIXIE LTD	Development of a unique and innovative architectural 3D printing platform which eliminates the need for digital design remodelling.	£95,277	£95,277

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Ronan O'Boyle, Lee Bassil, Michelle Greeff and Max Mihejevs, Fixie is a UK-based SME that aims to reduce the complexities in 3D printing, stemming from file conversion and manual remodelling processes. Offering backgrounds in product and web development, entrepreneurship and business management, the project's founders intend to develop an automated architectural 3D printing platform that can operate 50X faster than current processes, and will allow users to easily customise their models. In addition to the 3D sector, this innovation should further address wider architectural challenges posed by COVID-19.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
EVC POWERTECH LTD	6-minute EV	£100,000	£100,000

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

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## Project description - provided by applicants

Electric vehicles are great -- but they take time to charge up. A typical overnight charge takes 6-10 hours, whilst the very fastest state-of-the-art EV charges take between 30-45 minutes to complete. We will develop a revolutionary electric vehicle battery and install into an appropriately modified demonstration electric vehicle, and also develop and build a prototype innovative charging post system capable of charging from flat to full in just 6-minutes.

The project will produce a practical demonstration of an ultra-rapidly chargeable EV with the charging infrastructure capable of delivering the levels of power required, safely and reliably. A successful outcome to this R&D programme will deliver the following:

- \* A novel high-current battery design capable of charging from flat to full in 6-minutes.
- \* A rapid DC charger that is scalable to provide up to 1MW charging
- \* An electric vehicle retrofitted with the new battery, that can be completely charged in 6-minutes
- \* One or more patent applications

This project is focusing on 'final mile' journeys, both for goods and people. By 'final mile' we're referring to short journeys of just a few miles, such as an Amazon home-based worker delivering small packages within their locality; a Deliveroo driver delivering groceries and takeaways within their neighbourhood; or a commuter driving the few miles to their workplace.

COVID-19 has highlighted the need to quickly respond to this demand, both with goods deliveries and for people. Final mile home delivery has been transformed by the pandemic, with enormous demand that industry has struggled to respond to. The pandemic has also created a huge fear of public transport, meaning more people are reverting to private car use. By and large, the vehicles used for this extra activity are conventional diesel or petrol vehicles, with EVs discounted either because there is no facility to recharge them or their inability to be used 24/7 due to their need for long recharge times.

We are creating the technology ecosystem with battery development, vehicle integration and charging technology that allows electric vehicles to be recharged ultra-rapidly so they can be used at a moment's notice and operational 24/7.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EMBER CORE LTD	Smart EV charging system for high-utilisation commercial fleets	£123,867	£99,094

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

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

## Project description - provided by applicants

Road transport accounts for 21% of greenhouse gas emissions in the UK (ONS, 2019). To meet climate and clean air targets, a rapid shift to zero-emission vehicles is required. The current pandemic has highlighted the need for urgent action, with studies suggesting that exposure to fine particulate matter (PM2.5) is associated with an increased risk of COVID-19 death.

A lack of charging infrastructure is a key issue slowing adoption of electric vehicles. There is now significant momentum behind the development of car charging networks. However, none are suitable for large commercial vehicles such as HGVs and coaches due to a combination of high prices, unsuitable locations, low speeds and no guaranteed availability.

Some users of large electric commercial vehicles have got around this by developing their own depot infrastructure. This requires significant upfront investment which is hard for businesses to justify in a COVID environment. It's also fundamentally inefficient, analogous to every business building their own petrol station. Finally, it's not suitable for businesses that are operating vehicles that do high mileages without regularly returning to base (hereafter referred to as "high-mileage fleets") -- e.g. long-distance HGVs, intercity buses and tour coaches.

For this project, we are developing a charge station software platform designed around the needs of commercial users. Specific innovations will include:

- \* Smart scheduling: A software platform that integrates with the ultra fast charging hardware and gives operators the ability to schedule charging sessions. This will be done via a web interface or through an API. The API will allow for smart use cases, for instance integrating charger scheduling with satellite navigation or drivers hours systems
- \* Dynamic power management: Tight integration with charge station hardware will allow power delivery to be started and stopped based on a wide range of inputs. For instance, charging might be slowed down if the user does not require the vehicle for some time. This would minimise battery degradation and reduce strain on the grid (thereby reducing costs)
- \* Availability monitoring: Heartbeat checks on the chargers will be combined with camera feeds allowing blocked spaces to be detected using machine learning. This will ensure absolute reliability of status information, critical for commercial users designing operations around charge point availability

We will demonstrate this solution with a working prototype at the end of the project.

A similar solution does not currently exist in any market today and this project takes the first step to solving the chicken and egg problem for high-mileage fleets leading to real-world reductions in carbon emissions. We will commercialise our solution both by developing our own commercial charging stations and licencing the platform to other providers.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MILLIAMP TECHNOLOGIES LIMITED	Remote Things - A Remote and Rural IoT Service Provider	£98,672	£98,672

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Things", is an Internet of Things (IoT) platform targeted towards rural use cases that is able to operate with reduced infrastructure requirements and has advanced features operating at the edge of the network in the rural environment.

Whilst recent UK Government initiatives have given the big 4 mobile operators a target of 95% of data coverage by 2025 which will enable IoT technology in a number of rural locations, there will still be some specific rural areas who will be left behind due to it being commercially or technically infeasible to install 4/5G, increasing the digital divide and impacting on rural industries. We propose to mitigate this with a license free, low cost LPWAN based technology LoRaWAN operating over a bespoke designed software platform with features that make it specifically compatible for rural use where underlying infrastructure such as power and broadband/fiber are not available. This will enable IoT technology for use in a number of applications such as environmental sensing, livestock monitoring and security. Lack of rural communications infrastructure is not a problem specific to the UK. It is believed that development of this platform will provide follow-on international opportunities that will help the UK lead the world.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
GENERAL AUTONOMY LTD	Aerial Warehouse Inventory Scanning Platform (AWISP)	£95,036	£95,036

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 ongoing Covid-19 pandemic has greatly affected E-commerce, with a large surge in online shopping activities. As customers continue to expect fast, reliable and low-cost shipping, the increased demand has placed pressure on warehouses and distribution centres, often requiring direct-to-customer shipping beyond their previous capacity.

Many small and medium scale warehouses across the UK operate in a labour-intensive way, where nearly all tasks are completed manually and are therefore vulnerable to human error. Combined with the increased operational and infrastructural demands introduced by Covid-19 pandemic, it can be challenging for warehouses to keep up, especially with less urgent activities, such as stock taking. One of the ongoing challenges for warehouse managers is how to keep an accurate and up-to-date inventory list and capacity analysis (with a potentially even reduced workforce due to Covid-19) to guide their operation and inform strategic business plan. Although automated stock taking solutions are available, they are often prohibitively expensive, interrupt operations to install and typically require a modern facility design. As such, they are beyond the reach of many SME's.

This project aims to provide an automated inventory management solution to the warehouse sector by developing a well-equipped aerial robotic system. This innovative system will scan the warehouse efficiently and extract inventory information accurately in an autonomous fashion without human intervention. This will not only deliver timely inventory information but will also reduce the labour cost for inventory tracking, allowing workforce to focus on other important tasks. By only requiring a single UAV and no infrastructure changes, the operating cost will be accessible to small and large businesses alike.

In this project, a prototype system will be developed and demonstrated in a small scale warehouse in the East Midlands to verify the benefits of such a system and attract potential end-users. We project the developed system will deliver at least a 50% cut of the operational cost on inventory taking comparing to a manual process. In the short term, this will help enable the growth of e-commerce in the UK without companies loosing stock to ageing or obsolescence. A more accurate inventory record in the warehouse also means a reduction of the carbon footprint in logistic sector in a long run, since unnecessary deliveries and returns can be avoided.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TUMBLING DICE LIMITED	Masking the Truth: Effective facial recognition in a COVID-19 world	£56,957	£56,957

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

The aim of this project is to develop a new facial recognition system, one which can perform accurately and reliably on partially occluded faces. The need for this has arisen as a direct result of the COVID-19 pandemic, where facial coverings have not only become common place but in many instances are now compulsory.

In July 2020, the US National Institute of Standards and Technology (NIST) published a report which stated that facial recognition algorithms developed before the emergence of COVID-19 have "\_great difficulty\_" in accurately identifying people wearing facial coverings.

According to NIST: "\_Even the best of the 89 commercial facial recognition algorithms tested had error rates between 5% and 50% in matching digitally applied face masks with photos of the same person without a mask.\_"

During this project we will implement a facial recognition system which is;

- \* Generic. Meaning it will be capable of efficiently classifying any image.
- \* Can be run on low power hardware. Meaning it will be energy efficient and limit GHG (greenhouse gas) emissions.
- \* Capable of self-directed dynamic learning. Meaning it will be able to learn 'on the job'.
- \* Shows no subject bias.

A recognition system with these attributes will be disruptive, game changing and a clear advance over the state-of-the-art.

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GLOBAL REMEDIATION TECHNOLOGIES LIMITED	Decarbonising the Oil Industry	£111,622	£99,344

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 extraction of crude oil, contaminants comprising sediments and water form an oily sludge discarded by the oil industry as hazardous waste at huge environmental and financial cost. These sludges contain circa 50% oil and approximately 1% of all crude oil production is lost in sludges, equivalent to the output of world's 19th largest oil producer, Oman.

Currently the oil industry has limited options for sludge disposal. Within UK and Western Europe, production waste sludges are incinerated and each tonne of sludge typically releases 1.5 tonnes of CO<sub>2</sub>. In many countries outside Europe, where regulations are less stringent, waste sludges are landfilled into large open pits, creating environmental hazards for wildlife and water resources. In both cases the environmental impact is enormous and additionally, colossal volumes of valuable crude oil are wasted.

Various published papers estimate in 2013 the global stockpiles of discarded sludges exceeded 1 billion tonnes and growing at the rate of 120 million tonnes each year. With the typical cost of incineration being >\$135 USD per tonne, the available market today exceeds \$200 billion.

Global Remediation Technologies Limited ("GRT") is a UK company that has developed an innovative, disruptive and green technology which both cleans these sludges and recovers the entrained oil using a natural phenomenon associated with the vaporisation of water. After extensive development, a pilot system was constructed in the UK and deployed to an Omani oilfield in early 2020. The results unequivocally proved the concept, confirming the technology generates no carbon emissions, is substantially cheaper than incineration and additionally, recovers 99.9% of the crude oil from the sludge.

The environmental benefits are substantial; elimination of the CO<sub>2</sub> from incineration, ending the expansion of oil pits and their disastrous ecological impact, (e.g. the tailings pits from the Canadian tar sands), and preserving instead of wasting, precious oil reserves.

The Covid-19 outbreak has severely affected the Oil and Gas Industry. BP alone has announced a \$6.7Bn loss last quarter and the loss of 10,000 jobs.

GRT's value proposition to the Oil Industry is to improve environmental performance and increase oil production at zero cost whilst reducing their costs of sludge handling. Three key drivers in the oil industry boardrooms comprise:

- \* Reducing operating costs
- \* Improving environmental performance, with reduced regulatory risk
- \* Increasing productivity, without investment in exploration and drilling of new wells

GRT's proposition addresses these drivers, aiding the survival of BP and others by:

- \* Reducing waste volumes, disposal costs and operating costs
- \* Delivering an economic means to clean up the vast legacy of deposits without generating considerable quantities of CO<sub>2</sub>
- \* Increasing oil yields by circa 1% at zero cost, increasing productivity

Note: you can see all Innovate UK-funded projects 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 proposed project is to accelerate the transition of GRT's technology from proof of concept to production scale, overcoming minor remaining technical challenges, advancing designs and minimising time to market.

The oil industry has been decimated by COVID-19 and GRT's progress is stalled. Innovate UK supporting GRT would be of direct benefit the environment, the oil industry and UK's drive to Net Zero.

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 INTERRUPTION LIMITED	Classifying Advanced Malware into Families based on Instruction Link Analysis - project name: RAPTOR	£95,138	£95,138

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

Cyber-attacks can cause significant loss of business intelligence and intellectual property, damage to brand reputation and loss of money. The incidence and evolving technical complexity of malware is increasing, and the upsurge of Cybercrime as a Service means less skilled cyber-criminals can buy malware bundles to launch sophisticated attacks and shift into cyberwarfare.

It is not just the reputational damage and the material cost that is impacted by cybercrime. There is an impact on public safety and the quality of life to the public when services such as the NHS are not available. Recently, a new ransomware variant called Ekans has been discovered targeting critical infrastructure. For these systems, which include power generation, water treatment, and hospitals, loss of productivity associated with a ransomware attack can have a devastating impact.

Better malware detection means better protection for end-users. Cyber Security is one of the UK government's strategic priorities, and they have stated that addressing this challenge would have stopped attacks such as WannaCry, following a government report that estimated the ransomware virus caused approximately £19m of lost output and £73m in IT costs to the NHS. Experts have warned that 900 people a year may be dying because of weak NHS computer systems.

RAPTOR seeks to bolster and enhance these systems' current malicious program practices.

The difficulty in identifying and attributing malware poses a significant global risk. Harnessing Artificial Intelligence and Machine Learning, RAPTOR will explore how we can improve both current and future protection from persistent malware and advanced persistent threat (APT) attacks, to create a system that continuously improves detection rates as it is exposed to more data and malware.

This innovation focuses on APT models, the most challenging area of detection and attribution. The ability to use Machine Learning models and algorithms to discern patterns and perform feature extraction relevant to the origin of the malware code is a significant advancement in the development of robust analytical and informative models.

RAPTOR will positively disrupt the malware analysis market, by extending the abilities of systems that are already in place thus protecting against the growing threat of persistent cybercrime to businesses, governments, and citizens and supporting research institutions to better understand how persistent malware behaves.

This will position the UK as leaders in malware analysis and research, bolstering our global reputation in the field of cybersecurity.

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KLIK2LEARN LIMITED	Using data analytics to evaluate impact in online learning	£93,386	£93,386

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 current disruption to education has impacted hugely not just on the lives of young people who will come to be known as the Covid generation, but on society as a whole.

Although the spotlight has been on educational technology, digital technology has reshaped human interaction well beyond education.

While other sectors of the economy including social media networks and retail platforms have highly sophisticated methods of gathering, analysing and benefiting from huge amounts of data, this has not yet impacted on learning analytics. Where it has been applied, it tends to be used for narrow applications or interventions. Our approach is to analyse learning networks to provide a more holistic view of one-to-one and group collaboration and investigate the impact of collaborative methodologies and materials. Improving collaborative learning is a desired learning objective but difficult to measure. With our approach, contributions will be mapped and measured.

Our overall objective is to analyse learning networks of teachers, resources and learners in order to recommend effective pedagogical interventions and measure their success. We address important questions in the current debate on education in a post Covid world:

What is the best model for blended learning?

What is the new role for the teacher?

Does a more connected learning network lead to better collaboration skills and student outcomes?

Can we replace the random selection of resources with pedagogical interventions that actually improve student performance?

Crucially, will improved analysis of the learning network improve results for students disproportionately disadvantaged at the moment?

The project involves a multi-disciplinary partnership between learning technologists, data scientists, game researchers, computer scientists and pedagogical innovators.

Klik2learn has an experienced team of programmers, pedagogical expertise and is the digital development partner for Scotland's largest FE college with access therefore to Moodle data.

All education organisations deploy some form of Learning Management System: either Moodle, or global brands such as Blackboard, Canvas, D2L and Google classroom. However, a deep understanding of these networked learning environments is lacking. We cannot clearly demonstrate impact on learning. As a spin-off, we could in future, offer a more objective predictor of grades than teacher estimates and moderation algorithms.

Our approach is founded on a strong grasp of current learning theories and a wide knowledge of the research on learning analytics dashboards. The initial

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focus will be on extracting relevant data and developing an analysis of the network: learners, teachers and resources -- broadly in line with the principles of socio-constructivist learning and communities of practice models.

The first pedagogical interventions will be focused on developing and measuring peer- to -peer collaborations including gamification techniques and simulations.

Further interventions will include investigating the impact of one-to-one and group tutoring.

The company has direct experience of building its own LMS: a Digital Learning Hub offering a networked environment of core products, a wide variety of additional learning resources and tools to facilitate tutor/learner interaction. This offers an ideal test bed for efficacy measurement using insights from larger networked environments.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
4AX TECHNOLOGIES LIMITED	Research and Development of Wind Turbine internal blade inspection system - AI MVP	£90,934	£90,934

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

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Project description - provided by applicants

Research and Development, demonstration and testing of AI-enabled Wind Turbine internal blade inspection system

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	A SYNTHETIC BIO-MIMETIC TO TREAT CANCER: Patent protection of UK's global lead in cell-free Immune Oncology.	£98,918	£98,918

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

### COVID-19 HAS INTERRUPTED PATENT PROTECTION OF A NOVEL ANTI-CANCER BIO-MIMETIC

- \* Applicant LIFNanoRx (LNT) has invented an IL-6-based bio-mimetic nanoparticle to treat cancer, exemplified by "IL-6-MOF".
- \* PATENT PROTECTION is urgent : Government lock-down due to COVID-19 prevented essential prototype production and testing to underpin the Patent.
- \* This Project will enable Patent filing by May 2021\.

### BACKGROUND

- \* Although new drugs have brought success in treatment of some cancers for most solid tumour types mortality rates remain unchanged, including lung where, notably, COVID-damaged lungs may be at increased risk. As a treatment alternative to drugs, new approaches tap into the patient's own immune system, known as Immune Oncology (IO)
- \* One aspect of IO is use of CHIMERIC ANTIGEN RECEPTOR - T (CAR-T) cell-mediated killing of cancer cells - successful for haematological malignancies but limited for solid cancers. An achilles heel of CAR-T is need for genetic manipulation and thereafter GMP- manufacture of clones - incurring high cost and major environmental impact.
- \* Despite their biological complexity, the CAR-T cell approach has rapidly expanded as an alternative to conventional treatments, especially for leukaemias and lymphomas. CAR-T companies have proliferated, with high stakes and Pharma mergers and acquisitions (M&A) including Celgene and Juno Therapeutics for \$9 billion 2018 and Gilead acquiring Kite Pharma for \$11.9 billion in 2017\ . Whilst this commercial activity expands, key challenges to the CAR-T approach remain, including \_severe toxicities\_; \_poor CAR-T cell access to tumour\_; \_poor CAR-T cell survival in vivo\_; \_manufacture capacity\_; and \_regulatory hurdles\_ (NatureReviews Clinical Oncology 2019).

### INNOVATION: BIO-MIMETIC NANOPARTICLES TO TRIGGER ANTI-TUMOUR ATTACK \_IN SITU\_

- \* Our bio-mimetic solution to the hurdles of CAR-T is to bypass need for CAR-T totally. We activate endogenous "killer" T cells within the tumour using our proprietary IL-6-MOF biomimetic. This provides a simpler, cleaner, synthetic approach to IO that is scalable and universal for all tumours.
- \* Our longer term aim is to treat Mesothelioma, a rare cancer of the mesothelium - the thin sheet of tissue that lines the pleural cavity and forms a sac around the lungs. Caused by exposure to asbestos with some 50 year lag-time, survival is around 12 months after diagnosis with breathing becoming obstructed. Since the lymphocytes within the tumour are physiologically silent, we aim to deliver IL-6-MOF directly into the pleural cavity using a catheter: the rational is that the IL-6-MOF will bind to, and trigger the silent tumour-resident lymphocytes into activity, turning them into "killer" T lymphocytes. These killer T cells will orchestrate immune attack against the mesothelioma cancer cells.

### PUBLIC FUNDING

- \* This award will be pivotal at three levels: (i) bringing a new \_"IN SITU"\_ approach to Immune Oncology (IO) led by the UK; (ii) vastly reducing adverse environmental impact and cost of IO - with potential applicability to all types of solid tumour; (iii) bringing to the UK new employment across the industrial supply chain, and inward investment from Pharma.

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\* Public funding will be transformative for public gain .

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Infection control to protect vulnerable wheelchair users	£92,092	£92,092

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

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

## Project description - provided by applicants

Wheelchair users need help to be safe against COVID-19. Centaur can adapt its vehicle and vehicle users' experience to meet new needs of highly vulnerable customers at risk of disease transmission.

COVID-19 disproportionately affects disabled and older people, particularly those who receive care. As a result of COVID-19, 20,000 residents of care homes and 22,000+ disabled people have died, two-thirds of all deaths from March to May (ONS). Deaths in this population have been linked to poor infection control by carers working in multiple locations (DHSC).

As a result of the DHSC report in April, vulnerable people in all settings worry about disease transmission and reduced/eliminated care visits. Additionally, carers worried about contracting COVID-19 and went into isolation leaving little or no care for homebound vulnerable people.

Wheelchairs increase the risks of users contracting COVID-19 due to difficulty keeping it free of airborne or surface based droplets containing the virus. In addition, as a result of being below the height of most standing individuals, wheelchair users are at increased risk of having saliva droplets land on them or the equipment, where they can remain infectious for up to eleven days (Imperial College, Journal of Hospital Infection).

Government leaves wheelchair users to fend for themselves - 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 often being left to the individual.

Many wheelchair users are therefore wishing to maximise their independence to reduce care support requirements and manage with reduced support available.

Currently, wheelchairs do not offer COVID-19 infection control features. Centaur's current design has fewer joints than and, therefore, is far easier to clean than other wheelchairs. Antiviral materials may offer an element of protection to users but the main focus of innovation will be on Centaur's design, both its features and service design. Centaur will review its design to further reduce any disease hosting crevices, improve cleaning service reminders and evaluate available paints/lacquers plus 'virucides'.

Centaur will test and deliver COVID-19 infection control product and service specifications and update our existing prototype antiviral materials, if possible and safe.

The project team consists of world class partners with backgrounds at Ford as Global Design Chief, Director of Design Age Institute (former COO of Independent Safeguarding Services), MD of Open Inclusion - global leading inclusive design agency, and RLE's leading advanced materials specialist.

Centaur's PEVs aim to become zero carbon emissions through multiple means, including:

\* Using new "rugged plastic" materials that are easier to recycle than existing wheelchairs

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

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

- \* Modern batteries are more environmentally friendly
- \* New batteries are made out of recycled materials
- \* The maintenance plan will provide for battery recycling

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Interactive Sales Catalogue for Book Publishers	£65,295	£65,295

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

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

## Project description - provided by applicants

New releases are the lifeblood of the publishing industry.

Book publishers generate most of their annual revenues from new releases, but sell only a tiny percentage direct to consumers.

Books are mainly sold via booksellers, from indie bookshops to national chains like Waterstones to international giants such as Amazon. To ensure their books are stocked and prominently displayed, publishers actively promote and sell their new releases into these channels and ensure booksellers display, promote and sell publishers' output online and offline.

The motivation for the project "Interactive Sales Catalogue for Book Publishers" is to improve how new releases are promoted and sold to the trade ("B2B sales") which has been severely disrupted by the pandemic.

The traditional approach is based on printed sales catalogues sent in large numbers to bookshop staff and frequently followed by physical review copies of new book releases. Publisher's sales representatives follow-up by meeting booksellers face-to-face across the country. The pandemic has severely disrupted this practice and briefings are increasingly moving online.

In addition, it has long been recognised that publishers sending printed sales catalogues and review copies unsolicited and in large numbers to booksellers is an environmentally wasteful activity. Unsolicited review copies often remain unopened. The few that are read by busy retail staff are read "professionally", meaning only the first and last fifty pages are browsed. This is an immense waste of paper, packaging, and unnecessary deliveries. The pandemic and the associated move to online meetings offer an opportunity to rethink this practice.

This project will provide UK publishers with an innovative tool using the fixed-layout ePUB format and the Jellybooks Cloud Reader to provide an online magazine-like experience for promoting new releases to booksellers in the UK. Retailers will be able to access the digital review copies of their choice directly from within interactive sales catalogue. This is a web-based reading solution that requires no app to be installed and no file to be downloaded.

This novel service is based on a prototype built by Jellybooks for a large academic publisher prior to the outbreak of the pandemic and allows for a socially distanced, online approach for promoting and selling new releases to booksellers as a substitute for the seasonal spring and autumn sales catalogue that publishers print and distribute in large numbers to booksellers.

The proposed service is unique in providing very detailed engagement and reading analytics, giving publishers' sales representatives detailed insight into what books are getting attention so they can focus their online sales meetings on the books that are getting booksellers excited.

The Jellybooks Cloud Reader provides access to review copies of many kinds including narrative books (re-flowable ePUB), illustrated books (fixed-layout ePUB) and audiobooks (MP3-LPF). The Jellybooks Cloud Reader is a turn-key solution based on the open-source Radium Web architecture and is able to support visually impaired readers and readers with other accessibility 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

The project is being undertaken by Jellybooks, a world-class publishing technology specialist headquartered in Brixton, London.

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VERIFIABLE CREDENTIALS LIMITED	COVID-19 Certificates for All	£89,040	£89,040

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 a severe shock to the UK economy. Millions of people have been furloughed, thousands have died, and many more hospitalized. The virus is highly infectious and people are rightly cautious about returning to "life as normal" if they cannot be assured that the people they come into close contact with are not infectious and do not pose a significant risk to their health. As the Tony Blair Institute for Global Change stated in its August 2020 report 'Taking the UK's Testing Strategy to the Next Level', "\_The UK should commit to an objective of rolling out mass testing before the end of 2020\_". The report identifies five pillars for achieving this, the fifth one-being that the results from the different testing suppliers should be fed into a single national database, which will lead to health passports for every individual.

Our project will provide the basis for these health passports (which we call COVID-19 certificates). Our system will allow everyone, regardless of their age or technical ability, to show they are less of a risk to themselves and others. We will do this by:

- \* enhancing our application independent Verifiable Credentials middleware to become "all-inclusive", so that it can be used by anyone for any application in any domain,
- \* enhancing East Kent University Hospitals NHS Foundation Trust (EKUHFT)'s COVID-19 test database to strongly identify the patients who take the tests,
- \* integrating the above two systems together to provide a COVID-19 "health passport" application,
- \* using our integrated system as an exemplar for other NHS Trusts to adopt,?
- \* working with NHS-X to integrate the different COVID-19 certificate systems together so that they can form a national interworking system.?

Verifiable Credentials are the topic of a new World Wide Web Consortium (W3C) Recommendation and describe the content and structure of cryptographically-secure and privacy-protecting credentials to represent such things as: credit cards, passports, vaccination certificates, driving licenses etc. Prior to starting this project we have already built a proof of concept verifiable credentials infrastructure containing a dummy database to simulate those of real issuers. Our middleware supports people with smartphones, laptops or other computing devices, but not those without any device.

In this project we will replace the dummy database by an enhanced version of the existing EKUHFT database, which was built at very short notice in March 2020. It only contains the person's mobile phone number, so that the test results can be returned by SMS. But it has no validated knowledge of the identity of the tested people, which we will add in this project.

Using the principles of "inclusion-by-design" our COVID certificates will be available to everyone without smartphones: the old, infirm, illiterate, blind, poor etc. Power of Attorney certificates will be available for the incapacitated. Once we have built the integrated system we will perform live trials with people in real business settings. We have the following use cases: patients being discharged from hospital into a care home, people visiting business such as dentists, hotels, and restaurants via public transport.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EDUCATION INNOVATION PROJECTS LIMITED	ALPS - Accelerated Learning Platform for Schools	£90,814	£90,814

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

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

## Project description - provided by applicants

ALPS - Accelerated Learning Platform for Schools - is a digital-mentor and research resource which curates and promotes, in 'real time', the most up to date, best practice advice and research to ensure the rapid and effective continuing professional development (CPD) of Education Professionals. ALPS empowers teachers to increase their professional skills in a self-regulated, sustainable and 'Covid19-safe' way.

The DfE 'Teacher Standards' document (2011) eloquently explains the importance and integral role of professional requirement in education:-

"Teachers make the education of their pupils their first concern, and are accountable for achieving the highest possible standards of work and conduct. Teachers act with honesty and integrity ; have strong subject knowledge, keep their knowledge and skills as teachers up to date and are self-critical, forge positive professional relationships and work with parents in the best interests of their pupils."

ALPS therefore addresses the challenges introduced by COVID19 -- by enabling targeted and trackable professional development to take place online and by offering content-rich interactive engagement at a pace that can be managed by the education professional. It enables Schools to be fleet of foot in responding to changing staff development needs as well as giving them the ability to ensure their resource allocation is precisely directed where most 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EXAGENICA RESEARCH LIMITED	HYDRA TF	£99,871	£99,871

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

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

## Project description - provided by applicants

Currently merchant vessels are strictly limited to carrying cargoes like crude oil on a singular outbound journey, returning with empty holds. The proposed Exagenica Research HYDRA project seeks to test the conceptual viability of a novel maritime engineering solution which, if proven, would enable bulk carriers, crude oil, product and chemical tankers to be multi-purposed in terms of the type of cargoes they can carry. This would facilitate transportation on inbound journeys, potentially transforming shipping economics and its socio-environmental impact.

The HYDRA solution consists of an innovative, pre-fabricated conversion system designed by Exagenica Research. When implemented across the respective hold areas of a tanker, the HYDRA system will extend the ship's capability to carry more varied cargoes without the need to undergo expensive or lengthy cleaning.

In addition to dramatically improving transportation versatility, the HYDRA conversion has also been designed to improve the structural integrity of hold areas, minimising the potential environmental damage caused by a hull breach while transporting liquid cargoes such as crude oil.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SPIRIT DIGITAL LTD	CTV-Pulmonary Rehabilitation: a digital approach for delivering home-based exercise and education to improve lung health that overcomes healthcare delivery problems caused by Covid-19	£99,991	£99,991

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

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

## Project description - provided by applicants

Pulmonary Rehabilitation (PR) is a way to improve lung function in patients with lung diseases. Evidence shows that accessing PR improves people's ability to walk further, helps them feel less tired and breathless when carrying out day-to-day activities.

90% of patients who complete a PR programme have higher activity and exercise levels, and report an improved quality of life. PR has also been shown to support better self-management and reduction in exacerbations, reduction in numbers of acute and emergency admissions, and reductions in primary care appointments.

A PR course typically lasts six-to-eight weeks, with two sessions of around two hours each week, including aerobic exercise and resistance training and lifestyle support via education. Pre-Covid-19, PR courses were delivered in groups of 8-16 people and conducted in local hospitals, community halls, or leisure/health centres. PR courses were supported by a team of health care professionals including physiotherapists, nurses and occupational therapists.

The Covid-19 pandemic has caused cessation of PR courses in a group setting; there is now an unmet need to provide PR in a patient's own home, that is inclusive for all patients.

Spirit Digital has developed CliniTouch Vie (CTV), a secure, TRL-9, fully-proprietary CE-marked medical device software platform (accessible via mobile or tablet devices, or web browser) for remote patient monitoring. We will develop a new software module for CTV to deliver home-based pulmonary rehabilitation.

Our approach will:

- \* offer greater functionality than competitors.
- \* be safer than competitor virtual reality solutions for home-based PR.
- \* overcome Covid-19 stopping group PR exercise classes.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CREATE INNOVATION SOLUTIONS LTD	KlikPower Precision measurements and scavenged energy for smart power networks	£99,345	£99,345

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

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## Project description - provided by applicants

KlikPower is a project led by Create Innovation Solutions Ltd and supported by CREST at Loughborough University focused on the development and evaluation of a very low cost, remotely readable, non-invasive electricity substation monitoring sensor using an innovative and disruptive technology already proven at TRL3 (experimental proof of concept) level, leading to a practical pilot demonstrator (TRL6 -- technology demonstrated in relevant environment) to gain knowhow to turn this idea into a product. KlikPower sensors will form a network which will provide data and information focused on the business needs of UK distribution network operators and private network operators including rail companies, together with similar organisations in other countries who require cost-effectively obtained and timely data in order to more actively and efficiently plan and operate their networks in a far more uncertain world -- where there are large amounts of intermittent renewable generation, many electric vehicles (which may be consuming or providing power) and much weather dependent heating connected to low voltage electricity networks.

The KlikPower network has the potential to deliver data and information services at both lower costs and with more advanced functionality for both legacy and modern smart grid power distribution substations and cables enabling network operators to drive down their operating and capital costs to benefit customers whilst driving towards net zero targets.

There is a strong market pull for such a device from these sectors with a potential avalanche of applications driven by the need to facilitate active network management to provide real-time support for intermittent low carbon generation, electric vehicles, and decarbonised space and water heating -- all necessary to decarbonise the economy in line with the Government's Clean Growth Strategy and to meet the legal requirement to achieve net zero in greenhouse gas emissions by 2050.

COVID19 has put immense pressure on almost all of the economy. As a result, many asset-based companies now have financial pressures, resource issues, operational restrictions changes to demand peaks and profiles and work backlogs. Additionally, there is a requirement to do more with existing infrastructure with fewer resources while improving sustainability and reducing carbon related emissions and minimising costs so as to limit the burden on energy and other users. A step change in operational strategies is needed to fulfil these requirements. KlikPower is directly focused on the achievement of this by providing systems that deliver a step-change.

Create Innovation Solutions Ltd. is an SME that specialises in scoping innovation and is working on this project with the Centre for Renewable Energy Systems Technology (CREST) at Loughborough University.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ENABLE MANUFACTURING LTD	Proving Additive Casting	£83,079	£83,079

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

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

## Project description - provided by applicants

Now more than ever the UK needs an agile and local manufacturing base that uses the latest technology to create high value components for all industries from aerospace to construction. There is an additive manufacturing technology which, with the help of a new supply chain, can provide effective and easy to access route to additively manufacture metal components. However, the technology and supply chain need to be trialled and tested to provide evidence that this technology is capable of being used to additively manufacture metal parts to the standards and costs required for these sectors.

This project will do just that. We will design test geometries of different sizes and complexity and then manufacture these in different metals through a broad UK focused supply chain in varying quantities. The parts will be tested for all critical properties including costs. The project will therefore prove the technology and supply chain for lots of metals, in quantities from 1 to 300 parts. The findings will be made available in a white paper and associated technical data to assist companies with design for manufacture. The resulting technology and supply chain will be used by Enable Manufacturing Ltd to provide manufacturing on demand for complex metal parts and thus all UK manufacturers can access to a newly qualified and cost-effective additive manufacturing service.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IS-INSTRUMENTS LIMITED	Identification of Micro Plastics Using Advanced Raman technologies (IMPART)	£84,648	£84,648

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

Plastic waste in the ocean is becoming an increasingly serious problem; damaging coastal and deep-sea environments, negatively impacting sensitive marine ecosystems and wildlife and even contributing towards climate change by threatening carbon sequestration mechanisms of ocean based picoplankton. In 2015, 381 million tonnes of plastic were produced with only 20% recycled. Manufacturing spills, tyre wear and UV breakdown of plastic waste result in microplastics entering global water systems - it has been estimated that 8.3 million microplastic particles can be found in just one cubic metre of ocean water. There is now increasing concern that these microplastics are finding their way into the wider food chain, with potential for far-reaching health consequences.

The Covid-19 pandemic has exacerbated the problem with huge increases in the use of plastic, disposable, personal protective equipment (PPE) globally. In the UK alone, 28-billion items of PPE have been ordered since the start of the pandemic; a scale replicated globally, along with increased use of other plastics. Acrylic sheet production, for example is up 300% since the start of the outbreak.

Ensuring that waterways and water sources continue to be free of this waste is becoming a significantly urgent problem which has been clearly amplified by the Covid-19 outbreak. This is likely to continue in the near-to-medium term as the virus is combated and more PPE is required. In order to tackle this issue, pollution transport pathways and ultimately their sources must be identified. This requires testing regimes that not only can locate microplastics but also identify their chemical composition, ideally in real-time and on-site. Current measurement systems are limited in their identification and quantification capabilities, either demanding samples be sent to an off-site laboratory for analysis or are completed simply by visual inspection. The fresh-water network (rivers, reservoirs and treatment works) are the transport pathway for primary microplastics entering the marine environment so will be targeted for in-situ analysis with this innovative solution, before application to marine sampling.

IMPART will develop a new handheld, Raman immersion probe that can both identify and characterise the presence of microplastics. Optical methods such as Raman spectroscopy present the opportunity for fast, reliable, high sensitivity in-situ measurement. Typically instrumentation of this type is constrained by the limited etendue or optical throughput characteristics of the spectrometer and probe system. In this project we will develop a new portable high-etendue Raman instrument and immersion probe, exploiting the properties of spatial heterodyne spectrometers.

The key advantage of this spectrometer design is that, for a given resolution, it provides 100-times increase in the etendue than can be achieved with a traditional dispersive spectrometer and, unlike a traditional Fourier transform spectrometer, it has no moving parts. These specifications lend the spectrometer to robust on-site use where rapid measurement turnaround in a challenging environment is required.

IS-Instruments Ltd, an innovative SME are experts in taking optical instrumentation from concept through to market for deployment and operation in challenging environments.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HydroSurv Unmanned Survey (UK) Ltd	HydroSurv API - Combining automated survey with automated data pipelines	£99,836	£99,836

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

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

## Project description - provided by applicants

HydroSurv Unmanned Survey (UK) Ltd, (\_HydroSurv\_) is developing \_HydroSurv API\_ - a groundbreaking Application Programme Interface and web-application connecting decentralised staff, our field-based survey teams and customers with our IP-enabled integrated robotic survey vessels in the cloud.

As with other field-based service operators, HydroSurv's survey operations were disrupted by the necessary restrictions in working practices and travel uncertainties which have emerged in the wake of the pandemic - but with monitoring programme impacts continuing in parallel to the crisis, it remains crucial that we establish measures to safeguard routine programmes and survey capabilities.

Deploying automated ocean-sensing instruments enables continued data-flow with reduced hands-on human input, but the role of cross-functional client / company teams in specifying, planning and data sharing and the infrastructure to support that with remote-working and reduced face-to-face contact has never been more important than during the COVID-19 pandemic.

\_HydroSurv API\_ is a proprietary data architecture which will enable teams to work collaboratively in the cloud, sharing digital forms, documentation and viewing geospatial survey data; connected directly to HydroSurv's low-impact, economic Rapid Environmental Assessment Vessels - improving speed, quality and resilience of waterborne data acquisition.

The project will deliver a working prototype / Minimum Viable Product validated through engagement with our customers and partners, and using Agile management techniques to develop, implement and test the new solution at pace

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
TORSION INFORMATION SECURITY LIMITED	Torsion. Working alongside business software to provide comprehensive data security and safeguarded file sharing for remote workers	£99,916	£99,916

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

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Project description - provided by applicants

Have you ever had access to files or information that you really shouldn't have had?

Coronavirus has massively increased the need for remote working but many companies don't have control over their sensitive data or who can access and share their files.

Torsion was developed to solve the problem of poor control of access to business files and data, and to stop the serious data security and compliance challenges which arise as a result. Our unique software solution works within the file structures and information systems that businesses already use, providing clear visibility and precise control of 'who has access to what'.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
YARDLINK LTD	Development of a mobile app with chat interface to revolutionise the construction supply chain, connecting customers to suppliers for the local supply of equipment they need instantly	£99,797	£99,797

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

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

Project description - provided by applicants

YardLink was founded to address the need for digitisation of the supply chain process in the construction sector to save time and money for businesses currently dependent on manual processes and with limited access to suppliers. The team, Omar Essa, Daniel Morris and Neeral Shah, are proposing the creation of an app-based solution that connects the customers to the nearest supplier with the available equipment. This innovation could save businesses millions in wasted man-hours and generate a year-five post-project revenue of £55.2m for YardLink.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
RUBIXX SOLUTIONS LIMITED	Rubixx Housing	£91,787	£91,787

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 creation of a modern cloud-based software system to provide to social housing organisations across the UK, enabling staff to work anywhere, residents to securely access their data and services on multiple channels and to deliver real value for money to the sector.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PFEFFER SAL LIMITED	Advanced Skin Health Prescriptive Treatment Platform	£100,000	£100,000

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

Pfeffer Sal was founded in 2015 by Andrea Pfeffer who believes that good skin health should combine skin care, nutrition and wellness that is specifically designed for you via a data-driven platform to meet our needs in today's world.

Our goal is to create an advanced and highly results driven skin health platform and product range that combines modern science and smart technology with a functional approach that anyone, anywhere, can benefit from. An everyday analogy to our service and product concept would be, the difference between getting a prescription for a medicine versus diagnosing yourself, going into a pharmacy and choosing a remedy. The first of which uses expertise and is results driven with the later leaving it up to the education and bias of the consumer.

The digital service coupled with the integrity of the at home care cosmeceutical prescriptions in low-waste packaging is a strong offering in a market that often feels wasteful and leaves skin condition diagnosing to the end consumer. We want to be at the forefront of what sustainable advanced skin therapies can look like: digital, medical-grade and resource conscious.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BIND-A-TEX LIMITED	Advanced Winding Capability For Next Generation Thermoplastic Composite Tapes	£97,529	£97,529

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 severely disrupted the aerospace industry and it has had a devastating effect on the whole supply chain. As a consequence many airlines are accelerating plans to retire older fuel inefficient aircraft such as Boeing 747's and look to operate more environmentally friendly lightweight composite aircraft. Currently the Airbus A350 has the highest composite content at 53% but there are further opportunities to replace metallic parts with recyclable composite alternatives.

Bindatex Advanced Materials Cutting specialises in the precision slitting of carbon fibre composites tapes for automated fibre placement in aerospace and this technology has been key to light weighting aircraft with thermoset composite materials which have the advantage of reducing the weight of aircraft but unfortunately are not currently recyclable.

Further light weighting opportunities in aerospace have been identified by using recyclable digitally printed composite components to replace metallic parts. Bindatex has been developing technologies to format continuous carbon fibres into filaments which are needed to enable the progress of this technology. Success of the project will help lead to the commercialisation of Digital Composite Printing and ensure that the UK remains at the forefront of the converting and formatting of the carbon fibre filaments whilst creating opportunities to recycle the in process waste created within the process.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TAUR TECHNOLOGIES LIMITED	Electric scooter with integrated communications and control for personal ownership	£232,866	£97,804

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

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

## Project description - provided by applicants

Personal Light Electric Vehicles (PLEVs) are becoming increasingly commonplace in cities across the world due to their potential to address a range of issues plaguing urban transport: road congestion, air pollution, noise, and over crowded public transport. Electric scooters represent a promising variant of this sector, because they offer superior portability when compared to bikes and do not require physical exertion. Covid-19 has further enhanced the benefits of owning an electric scooter by reducing the load on public transport and eliminating the risk of cross contamination from shared use vehicles

Until recently, most people's access to e-scooters has been through sharing schemes. However, as with bikes and other small vehicles, personal ownership is likely to become an important transport option.

Taur Technologies is developing a stand-on electric scooter for ownership that is engineered to meet the daily transportation needs of people living or working in cities, in terms of road-worthiness, safety and portability.

This project is focused on developing the integrated control systems required to bring innovation to the ownership of personal electric scooters by addressing the following distinct areas:

\* Control systems: Taur is developing a fully integrated control system and this project supports the development of the key modules and connectivity required to create a safe and reliable electric scooter.

\* Portability: When considering the potential for the mass adoption of e-scooters, the ability to integrate them with public transport is vital. Taur is developing patent-pending systems to significantly improve the portability and storage characteristics of e-scooters.

\* Connectivity: Taur is investigating the remote management of battery performance, to substantially increase the lifetime of battery systems, by utilising low-cost communications. Furthermore, adding a security layer will help prevent the increasingly commonplace theft of personal vehicles.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
EDGE MOBILITY LTD	The QXS - a Range of Rapid-Chargeable, Plug-and-Play Powertrains for Two-Wheeler OEM's	£99,959	£99,959

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

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### Project description - provided by applicants

The British two-wheeler market stands amongst the worst across Europe affected by COVID-19 and ended the first half of the year 26% down from 2019. Several two-wheeler OEM's have suffered considerably as a result, and their electric vehicle development plans severely delayed. At the same time, COVID-19 has led to a significant rise in the demand for small electric vehicles.

To enable two-wheeler OEM's to fast-track their electrification programmes and meet this growing demand without high up-front costs, we have developed a range of fast-chargeable, plug-and-play powertrain technologies. These can be readily adopted by OEM's, enabling them to go-to-market quickly and cost-effectively with new electric vehicles.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PHANTASM FX LTD	Virtual Location Assessment and Scanning Tool for Film Productions	£72,024	£72,024

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 are planning to develop a software tool to explore 3D scanned locations in a virtual environment, with film specific tools to assess suitability and plan operations and filming at the location.

The innovation will initially focus on the combination of 3D scanning techniques, game engine technologies and production specific software tools.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CALDERA HEAT BATTERIES LIMITED	Heat as a Service (HaaS) using Warmstone Zero Carbon Boiler (ZCB)	£50,702	£50,702

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 has developed a Zero Carbon Boiler (ZCB) 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 ZCB 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 four 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. These thermal losses are over 5x lower than conventional methods of storing heat, such as night storage heaters.

This project is about unlocking the full potential of the ZCB for Heat as a Service (HaaS) by:

1. Developing the communications so that the timing and rate of electrical charging can be set and varied on a minute by minute basis by an energy supply company,
2. Collecting heat usage data from the Heat Interface Unit (which replaces the conventional boiler), so that the homeowner can be charged just for the heat that they use rather than the electricity supplied to the ZCB
3. Working with large social housing landlords to establish initial trial sites, which will lead to 5+ installations in 2021 and can be used to demonstrate that rapid wide scale deployment is possible.

Supply side companies are currently developing software to actively control demand in the home and smarter ways to use energy by changing consumer behaviour. The Caldera Warmstone approach provides a means for storing electricity for heating. Heating is the largest home energy demand - normally 4x the rest of the homeowner's electricity usage.

The HaaS model will help low income individuals and families who will benefit the most from reduced energy costs by showing that a ZCB can be supplied and installed under a long term finance model.

The HaaS model has been trialed in a number of countries with heat pumps or conventional boilers, but not with a ZCB that is able to decouple electrical charging and heat supply by 1 to 7 days depending upon the time of year. This means that the unit can be charged when renewables are generating and the electricity price is lowest. Heat pumps work in real time and although they generate "additional free heat" they also have to operate when the consumer wants the heat or hot water, not when renewables are generating.

Low or zero carbon heating systems with lower cost of ownership normally have high upfront capital costs that make them inaccessible to those that have the most need for savings. To eliminate this initial capital outlay, the unit can be financed by a third party and the cost to the user spread over the expected 20 year life.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NITECH SOLUTIONS LIMITED	CBDContiCryst2 - Scale-Up of Continuous Crystallization Process for CBD Isolate Production	£95,873	£95,873

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

Pharmaceutical industry supply chains have been seriously impacted by the Covid-19 pandemic, with active ingredients and much formulation work currently off-shored. This is resulting in an urgent re-thinking of future supply-chain strategy both in Europe and in the USA, which will inevitably result in efforts to re-shore processes previously off-shored. Whilst a part of this expected change can be absorbed by excess capacity, industry will not want to build new batch capacity that is already obsolete, but rather move towards cutting edge, continuous manufacturing technologies as soon as possible. Reshoring of generic drugs in particular will require the use of Advanced Manufacturing technologies (including continuous process technology) to compete with existing low-cost, but high risk, supply chains.

NiTech Solutions has developed patented, state-of-the-art continuous reactor technology (COBC/R) which is gaining commercial traction in both pharmaceutical and specialty chemical industries. However, the reactor also has the capability to operate continuous crystallizations, and whilst continuous crystallizations have been demonstrated for a large range of compounds at small-scale in the laboratory, it has not yet been commercially adopted, despite the fact that crystallization is very common in the purification operations of the pharmaceutical industry.

This project has been developed to demonstrate continuous crystallization in an emerging segment of the healthcare industry where there is an immediate need: the extraction of pure cannabidiol (CBD) from hemp-derived distillate, a process for which we have recently received a large number of commercial enquiries. Production of high purity CBD Isolate in large volumes, low cost, and with minimal environmental impact will facilitate it's use in an increasingly broad range of products from healthcare to food & beverage. A 2018 report from the WHO outlined the health benefits of CBD in treatment of epilepsy and other medical conditions: in 2019 the US CBD market grew over 700% and the global CBD market is already worth >\$3 billion. However, the technology for crystallization of CBD remains at an elementary, batch stage, severely limiting the scale-up of production and the speed to market of CBD Isolate and therefore CBD Isolate containing products. Accordingly, the key objective of this project is to demonstrate the feasibility of employing NiTech's COBC technology in the crystallization of CBD isolate from an industry-supplied distillate, and to quantify the benefits of this process in terms of throughput, quality, safety, overall cost, and environmental impact versus traditional batch production processes. The operating boundaries of the process will be explored and optimised during the work program and output data used to inform design of our industrial scale CBD crystallization units.

NiTech will work, in this project, with the Institute of Biological, Environmental and Rural Sciences (IBERS) group within the University of Aberystwyth (UA). IBERS have extensive experience in processing bio-based materials and are able to handle hemp and hemp derived CBD.

NiTech and IBERS combined capabilities and competence will provide the full range of knowhow required to develop material and process parameters to deliver the desired product attributes and process performance using NiTech's COBC technology 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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FLUORETIQ LIMITED	RUBIVet: Rapid Urine based Bacteria Identification for Veterinary Applications	£93,490	£93,490

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

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

## Project description - provided by applicants

According to a recent survey of 532 veterinary surgeries by the Royal College of Veterinary Surgeons, 99% had noticeable reductions in weekly turnover, with 66% reporting reductions of 51% or more, as a result of social distancing measures implemented during the covid-19 pandemic. 451 of the 532 veterinary surgeries also reported that they had now moved to remote consultations which included new and repeat prescribing. 2-day laboratory testing has been the main stay for diagnosis of bacterial infections for nearly a century and is inherently sub-optimal for remote consultations. Our motivation is to challenge this distinct lack of innovation in this market and address the growing frustration amongst modern veterinarians with a simple, all-in-one solution to urine testing in animals.

In this project, we will be working closely with veterinary market leaders Anvajo GmbH, to deliver a rapid bacterial identification platform on Anvajo's pre-existing fluidlab R-300 device. This would maintain the same quality of results expected from a full laboratory analysis at a fraction of time, cost and inconvenience of the gold standard.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PARK IT SOLUTIONS LIMITED	Development and Commercialisation of Contactless Valet Parking for Airports	£197,078	£98,539

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 affected UK Airports with passenger numbers down upto 99%. Recovery of the airport industry will be built on passenger confidence as customers become familiar with a range of new services to keep them safe as they travel. Private vehicles will continue to be a significant proportion of the ground transport used to access local (national) airports and parking services will be required to store these vehicles.

Airports want to continue to offer a range of parking products for passengers and valet parking represents an extremely popular and important service (including accessibility) that enables passengers to start their trip close to the terminal.

Valet Parking offers a number of benefits to the airports and the passengers but current processes require a high level of contact between the operation and the passenger. This is from a combination of customer service focus (operations actively wanting to have contact with the passenger to ensure premium-feel and increase selling-touch points) and operational necessity. It is essential that certain information about the passenger is known to ensure their car is returned to them on their return without which there is a risk of 'lost cars' or significant delays in returning the car to the customer. Current tools are designed for use by the operator and there is no feasible way to easily remove the operator-to-customer contact and reliably run a valet parking operation.

Working with partner airports ParkIT (provider of leading valet parking software solutions) are working to find a solution to this problem. Through this 6 month industrial-research project, we (ParkIT Solutions collaborating with ExPD) are developing a Contact-Free Valet Parking service (CFVP) to support a wide range of improvements to offer air passengers an acceptable option when using private vehicles to access airports. CFVP will deliver an improved set of technologies that will remove the need for human interaction while still gathering the data needed to efficiently (and profitably) run a valet parking operation - empowering airports to build their recovery.

International airports are similarly reliant on parking revenues and this project represents an opportunity for ParkIT (and the UK) to lead the way in addressing this problem. A low-barrier-to-entry system that allows a range of industries to enjoy contact free, secure key exchange has a number of alternative uses (car dealerships, car rental, car auctions) and once available "off the shelf" ParkIT will look to engage suitable UK clients.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CM DAT LTD	CM-DAT: Using data to drive health and social care sustainability	£99,718	£94,718

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

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## Project description - provided by applicants

CM-DAT Ltd was established in 2019 with a clear long-term aim of developing a data-driven business intelligence platform. The platform aims to empower senior decision-makers in large scale service organisations - whether in the public, private or not-for-profit sectors - to manage their performance and costs, and make better-informed and faster decisions around the impact of different investment/dis-investment choices.

The platform allows decision-makers to aggregate and dynamically interrogate 'near live' cost and performance data in a systematic, comprehensive and integrated manner to solve problems. It 'systematises' analytical approaches already proven in service sectors including Care, Community Health, Housing, Highways, Street Lighting and Environmental Services. The component elements include data warehousing, data extrapolation and aggregation, data analytics, and data reporting.

Through this project, the proposed CM-DAT platform will help Health and Social Care managers across the UK to better inform and speed up decision-making around the short, medium and long term impact of changes in their approaches to staffing, property, and technology. Optimisation in the planning and management of these resources will be critical to the future economic viability of the sector. Equally, it will help to create operating models that will be more environmentally sustainable, reducing carbon and helping to address the climate emergency.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ELECTRIC DRIVE TECHNOLOGIES LTD	High Efficiency Traction Motor with Enhanced Mechanical Stability	£99,979	£99,979

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

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## Project description - provided by applicants

Fuel economy is a critical metric driving intense competition among the manufacturers to engineer vehicles that are more fuel efficient and more economical to manufacture over time. This project addresses the need for increased efficiency and longevity of electric powertrains in response to high energy efficiency requirement and the 'million-mile' automotive market. The vision of this project is to develop a high efficiency traction motor having enhanced mechanical stability. With enhanced mechanical stability comes lower noise, vibration and harshness (NVH), better product reliability and longevity -- all are value-add to the customers. Using a high voltage architecture, the motor current requirement can be lowered and hence losses can be reduced.

Electric Drive Technologies' ultimate goal is to integrate a permanent magnet traction motor and a silicon carbide-based inverter into a single compact unit. Such an integrated electric drive is suitable for deployment in medium/high-end EVs, commercial vehicles or HGVs markets. This 6-month R&D project focusses exclusively on the development of a traction motor. The objectives of this project are to design and build a prototype traction motor and demonstrate that noise and vibrations due to the bearings or shaft can be significantly reduced with Electric Drive Technologies' proprietary technology.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
WAFER ENTERPRISES LTD.	Eco-Tub, The Edible Ice Cream Tub.	£98,988	£98,988

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Brand:\*\*** Eco-tub is a 'purpose-led' brand designed to reduce waste and positively impact the environment whilst providing an improved eating experience to the consumer.

**\*\*The Product:\*\*** The world's first edible branded ice cream tub.

**\*\*What is it?:\*\*** An edible ice cream tub made of gluten free wafer, wrapped in a compostable, fully customisable paper sleeve. It can be eaten or else discarded like a regular ice cream tub. A fully compostable ice cream tub, we believe to be one of the fastest biodegradable tubs in the world.

**\*\*Target market:\*\*** The product is aimed at ice cream parlours, frozen treat kiosks and all vendors currently using plastic or 'wax' (PE) cardboard ice cream tubs for takeaway ice cream. With Covid-19 social distancing rules, there has been an increase use in takeaway packaging.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CURTAIN CALL LIMITED	Multi-sided Marketplace for Entertainment and Events	£99,836	£99,836

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

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

## Project description - provided by applicants

Curtain Call is dedicated to creating solutions for the performing arts, entertainment and live events industries whilst supporting a flexible future of work for entertainment-based freelancers and companies.

The proposed project tackles problems that freelancers in this space have faced in the current Covid-19 pandemic.

With the shutting down of theatres, live music venues and events, outdated practices within our industries have been exposed- on both sides of the employment equation. Curtain Call's solution will provide a future of work jobs and talent marketplace for Entertainment and Events where the sourcing, managing and execution of projects can be facilitated - empowering greater career management for freelancers.

As the next generation of talent marketplaces emerge globally, Curtain Call will be a critical tool for getting professionals working in the creative industries to be discovered more easily and back to work efficiently.

The project will be led by Curtain Call founders Matt Humphrey and John Schwab - with nearly 40 years experience within the entertainment sector, producing and working in film, television and theatre.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ROSETTA BRANDS LTD	Rosetta: Software that will enable sellers to use Amazon Vendor efficiently and easily for vastly improved wholesale logistics.	£99,536	£99,536

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 numbers of people shopping online during the Covid-19 pandemic has increased massively as people worldwide have stayed at home and non-essential retailers have closed. Post-Corona virus over 17 million British residents expect to continue shopping online. Sellers need to engage with e-commerce to achieve their market potential now more than ever.

Amazon is by far the UK's largest online market place. Amazon Vendor is Amazon's wholesale platform. It allows suppliers to manage their account, receive wholesale orders and supply Amazon in bulk -- who then sell it to the end consumer. Currently almost all software that has been developed to help people sell on Amazon has been targeted at Amazon Seller.

Rosetta Brands currently handle the wholesale logistics and supply Amazon on sellers behalf. We have developed our own software which can speed up our order processing massively -- what used to take up to 3 days to complete manually can now be done in a couple of hours. To 'talk' to sellers businesses computer systems, Amazon Vendor has recently introduced an application programming interface (API). This will be a far more efficient and comprehensive system than their current Electronic Data Interface (EDI), but it currently has no compatible Enterprise resource planning (ERP) software available. Rosetta are developing software so we can use it. Project funding will allow us to make this software compatible with other ERP software also and act as a go between between Amazon Vendor and a sellers ERP. Our solution will make onboarding and managing Amazon Vendor a far simpler process. Any Amazon Vendor supplier supplying any Amazon sector will be able to use it, opening up the Amazon Wholesale market to thousands of suppliers globally, and making it far more cost effective to continue selling online once the corona virus pandemic is over.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
I3D ROBOTICS LTD	IMVIGR - Intelligent Machine Vision Inspection for Glass Recovery	£81,785	£81,785

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

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## Project description - provided by applicants

The UK manufactures 750,000 tonnes of flat glass each year, three quarters of which goes into glazing products for buildings. In the UK, we generate almost 200,000 tonnes of post-consumer glass waste each year. Much of this goes to landfill or is crushed into aggregate. Glass is the perfect material for recycling, capable of 100% reuse within a modern circular economy. The main barrier to using more recycled glass for flat glass manufacture is the availability of recovered glass of an acceptable quality. This is because any slight contamination of the recycled glass used to manufacture flat glass will cause rejectable defects and result in several days of lost production, effectively cancelling out the environmental and cost benefits of recycling. Currently the recycled content of flat glass produced in the UK is between 20%--30%. I3D Robotics supported by Glass Technology Services aim to produce an integrated instrument capable of detecting contamination on recovered flat glass glazing products to encourage greater use of recycled content. This will enable recovery and support future development of circular economies for the UK's built environment, materials production, waste & recovery industries which have been dramatically impacted on by the COVID-19 pandemic.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ENTITYX LTD	Advanced Brand Safety: Empower news publishers to unblock £millions of lost ad revenue from pages mentioning COVID, using an innovative hybrid of knowledge graph and sentiment analysis.	£98,947	£98,947

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

Every day news publishers are losing out on precious advertising revenue that is being blocked because the articles mention the word COVID. This happens because of 'brand safety' tools, designed to protect advertisers and ensure that their ads do not appear next to unsuitable content. But current brand safety tools are blunt and out-of-date, they blanket block any page that features the word 'COVID'. As news sites cover more stories about COVID, this is having a significant effect on the revenues of an industry that was already on its knees. News publishers must choose whether to demand editors write less about COVID and protect revenues, or continue to allow editors to write about COVID, but accept that their revenues will suffer.

EntityX has developed a radical new technology that can more accurately understand the meaning of a web page. This project extends, transforms and accelerates that existing technology, to produce an enhanced brand safety tool. This new brand safety tool will enable publishers to unblock their inventory, by identifying the articles that mention 'COVID' that are brand safe, thereby unlocking the true value of previously blocked inventory, providing stable revenues and helping publishers to recover and maintain independent news coverage.

Our solution will be particularly helpful to local and regional news publishers, who have been disproportionately affected by the impact of brand safety tools blocking 'COVID' pages, but have the least resources to develop technological solutions. This solution empowers local news publishers, upholding community news, local democracy and accountability, by unlocking advertising revenue previously blocked by 'COVID'.

By making digital content more profitable, this solution supports and accelerates the long term trend towards digital and away from printed newspapers, thus directly helping reduce the carbon footprint and reducing the need for tonnes of paper.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TIME2 MEDIA COMMUNICATIONS LTD	Charity & social sustainability rating index	£98,250	£98,250

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

Validaid is an innovative software platform that uses AI and open data to connect philanthropic donations and sustainable investments with appropriate causes/projects. It offers a significant range of benefits including speed, trust and ease of use for all stakeholders including impact investors, organisations searching for funders, philanthropic organisations, and individual donors. The platform assists with compliance, risk management, and governance, as well as encouraging greater impact investing and philanthropy giving.

Offering impact investors, donors, financial advisors, family offices, solicitors, accountants and private wealth managers a fully automated Donor Advised Fund (DAF), matchmaking, and impact measurement service. This helps investors/donors fully understand where to put their funding and understand the impact it has on lives.

By aggregating trusted data from various sources including Companies House, Charity Commission and the index of multiple deprivation, Validaid makes it easier for all funders to see whether an organisation is genuine and bonafide, as well as understand the impact their work has on society. It also lets everyone see that the required governance documentation is being kept up to date, bringing more trust and transparency into the sector.

Similar to FICO, Experian, Equifax, Clearscore or Duedil, the Validaid software platform not only analyses financial stability of organisations, but also the governance behaviour and impact being made. Using proprietary algorithms and artificial intelligence, the platform aggregates data from a variety of sources, before creating a scoring system which helps bring greater confidence and accountability.

### **\*\*Issues being addressed:\*\***

- \* Trust & transparency about where the money is going.
- \* Individual investors/donors don't have knowledge of who/where to donate.
- \* Organisations find it difficult to diversify funding because of limited knowledge of funders.
- \* Organisations are spending a lot of time making ineligible grant applications.
- \* Applications are taking a long time because of refilling the same information over and over again.
- \* Funding foundations/organisations time is being taken up by ineligible applications, clogging up the system.
- \* Due diligence taking a long time.
- \* Funders lack knowledge on good projects
- \* Information in Charity Commission & Companies House isn't always up to date.
- \* Organisations find it difficult to communicate to funders about their good works.
- \* The impact on society isn't being properly tracked.

### **\*\*Validaid:\*\***

Encourages greater philanthropy giving and impact investing by making it easier for funders to donate and invest in projects and causes they care about and see the impact being made.

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

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Makes it easier for organisations to identify like-minded funders, automates due-diligence and simplifies the application process.

Always provides up to date information and stories on the work being carried out

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RESOLVE ROBOTICS LIMITED	Modular, Low-cost, Plug-and-Play, Automated Manufacturing for a Sustainable and Resilient Post-COVID Manufacturing Sector	£99,205	£99,205

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

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

### Project description - provided by applicants

Resolve Robotics are developing an eco-system of low-cost, modular, plug-and-play manufacturing machines which can be rapidly reconfigured into highly automated production lines for a wide range of products. Integral to this eco-system is a software application, to be publicly available on Steam, which allows users to virtually design, build, test and then manage production lines. Overall, we seek to enable a significant step-change in how products are manufactured post-COVID, making production more versatile and resilient to external disruption, as well as improving productivity through automation and remote working.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ENERGY LOCAL CIC	Smart Communities for Low Carbon Power Networks	£50,186	£50,186

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

There is a national goal to decarbonise and electrify heating and transport. We are exploring ways to use local renewable energy to reduce carbon and costs whilst minimising congestion constraints on the local electricity networks.

We will build on our existing work where local consumers use renewable power when it is generated through an Energy Local Club.

We will test tools to optimise demand matching to renewable generation, factoring in smart controls, the Internet of Things and, of course, household comfort and ease of use. We will also explore the emerging flexibility contracts that are now available to domestic customers, whereby; in return for payment; the network may ask them to turn things on or off to help balance the grid with Demand Side Response.

Controlling the demand and generation balance will also support network operators by reducing the stress and constraints at peak times, resulting in lower connection costs for new installations or properties.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BIOLOGIC TECHNOLOGIES LIMITED	3D printed next-generation synthetic biology hardware for sustainable food production and reduction of climate change	£99,988	£99,988

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

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

## Project description - provided by applicants

Humanity today faces three enormous challenges. The first is feeding 9.8 billion people by 2050\ . The second is mitigating climate change. The third is mitigating the existential threat of zoonotic diseases such as COVID19\ .

COVID19 has significantly disrupted organisations that are working to solve such challenges. However, the recovery from COVID19 brings a once in a generation opportunity to accelerate solutions that were already in motion.

The potential for beneficial economic and social impact is enormous. According to a May 2020 report from McKinsey Global Institute, as much as 60 percent of the physical inputs to the global economy could, in principle, be produced biologically. Around one-third of these inputs are biological materials, including animals bred for food.

Improving food production methods will help us address the biggest challenges of our time. One of the most promising new innovations is cultivated meat. By cultivating only the desired meat directly from cells, rather than growing animals with all of their associated overhead, we can produce meat with fewer resources and significantly less environmental impact. For instance, compared with conventional beef which is one of the largest contributors to climate change, cultivated beef is estimated to reduce climate change emissions by 74%--87%.

The main challenges for making cultivated meat affordable for mass markets are the advancement of synthetic biology research, scaling up production and reducing ingredient costs. These challenges are poorly served by classical approaches and require a new generation of powerful new biological hardware.

BiologIC Technologies (Cambridge UK) is developing the next-generation of life science automation fabricated from, and exploiting, the digital benefits of 3D-printing. BiologIC's pioneering and highly integrated digital hardware architectures allow the creation of powerful and affordable 3D-printed bio-processing units ("BPUs"). These BPUs allow rapid development and execution of novel, high-value and high-volume biological workflows.

The project will reinstate development that was disrupted by COVID19 and result in a highly innovative solution for synthetic biology food production, reducing the likelihood of new pandemics and increasing the resilience and localisation of a next-generation sustainable food supply chain that reduces a major cause of climate change.

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

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Note: These proposals have succeeded in the assessment stage 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 CONSULTATION INSTITUTE	MIDAS - Members of the Institute Data and Arbitration Services	£97,348	£92,481

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 create future economic benefit from the creation, exploration and exploitation of a new data asset in the field of public consultation and engagement. Specifically, the creation of a "\_consultation data warehouse\_" and arbitration services to meet new needs caused due to Covid-19\.

At the moment, consultors have no way of bench-marking their consultations to determine if they are effective. For example, if the responses are abnormally skewed in some way or what type of representation is "normal". Consequently, there is diminished confidence by consultees in the process and no way for consultors to help predict salience in terms of the issues they face.

Similarly, there is no common wisdom due to the rise in "distributed dialogues" (multiple conversations or consultations happening at different places and different times but about the same issues). This fragmentation of results means that government cannot benefit from the insights and this results in under-responsiveness.

Leveraging this data is not only about incremental revenue generation for the Institute, such as through increased membership. Organisations who have a duty to consult can use data to reduce costs through better planning and optimisation of operations, as well as reducing and managing risk such as fake-participation-fraud.

Furthermore, we propose creating a new online \_arbitration service\_ which piggybacks on this new knowledge. This would enable citizens to find easier ways of redress, alleviate pressure on the legal system and reduce the industry costs associated with judicial review. It would also create a marketplace for referrals from international regulators.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EASEL TV LIMITED	Streaming Media Platform for the Arts	£230,792	£99,241

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 'open' and 'shared' streaming media service for the performing arts industry; a 'Netflix for the arts', that includes the development of innovative scheduling, publishing and administrative support tools, and the operational support of a managed service provider, plus the ability for consumers to pay for shows through industry theatre and event ticketing systems.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
VOYAGER MARINE LTD	Design of the UKs first new Fully Electric Domestic Passenger Vessel	£98,872	£98,872

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

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

## Project description - provided by applicants

Voyager Marine is being adversely affected by COVID-19 and it is likely to see a continued fall in revenue as its customers significantly reduce their annual maintenance periods. Voyagers' customers are Domestic Passenger Vessels (DPVs) and fishing vessels which would normally occupy the boatyard for the much of the year, in 2020/2021 this will not happen. We have determined to make use of the opportunity created by developing zero-carbon, fully electric propulsion systems for the DPV and under 24m commercial workboat sector.

The funding provided will enable us to design a vessel to operate on the vital and busy commuter route between Cornwall and Plymouth. The vessel will operate for up to 14 hours per day without the need to plug in to recharge. The design will focus on a clean hydrodynamically efficient hull form to maximise the use of the stored energy available, be of a design and construction that will allow it to be able to effectively operate in a congested maritime environment, with strong tidal conditions, rough seas and challenging berthing locations. The design will exemplify the forward-looking approach that Voyager Marine is taking and will potentially include additional zero-carbon solutions such as an extensive cluster of photovoltaic panels or similar renewable energy sources.

This will enable the business to transition from a traditional boatyard, building and maintaining a significant number of the DPVs in operation around the UK today to a progressive boatyard, operating as a specialist hub with the knowledge base, skills and capabilities to design, build, convert and maintain zero-carbon, fully electric propulsion, commercial vessels into the future. This will make Voyager a very special place, allowing us to develop the boatyard, which includes a talented, skilled local workforce into an internationally recognised centre to meet the needs of the zero-carbon commercial vessel market of the near future.

Our aims and objectives match fully those of the UK central government through the Clean Maritime Plan, which aims to have zero-carbon commercial vessels operating in UK waters by 2025. In addition both Cornwall County Council and Plymouth City Council have established targets of being carbon neutral by 2030, our plans will also go a considerable way to supporting these objectives, by reducing the emissions of those vessels operating close inshore to zero by becoming fully electric.

The boatyard will be working closely with a team of naval architects from the Southwest, together with the vessel operator to ensure that we achieve a design which exemplifies the zero-carbon nature of the vessel, utilises renewable energy ideas i.e. Photovoltaic solar panels, is operationally effective in a harsh maritime environment and can operate effectively without regular charging for up to 14 hours per day. The designs must also gain the approval of the regulator to enable them to be used for the construction of the UK's first Fully Electric Domestic Passenger Vessel.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GRUBBY LTD	Sustainable and 100% plant-based recipe kit vending machine	£98,397	£98,397

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 are the UK's only 100% plant-based recipe kit provider. We are on a mission to make plant-based cooking more convenient and accessible to everyone, whilst helping people live healthier lives by increasing their consumption of plant-based food.

The innovation funding will allow us to develop the world's first recipe kit vending machine for transport hubs, residential hubs and other appropriate public spaces with high footfall. Our tasty sustainable recipe kits, available in high tech vending machines will allow customers to pick up everything they need in one handy bag for stress-free and healthy evening meals.

The recipe kit market has seen significant growth in recent times, as has plant based food. We want to combine these two trends and increase accessibility and availability for consumers. In doing so we will give more people the opportunity to cook delicious plant-based meals with fantastic British produce without any hassle.

Our charitable partnership with 1morechild.org will also provide a meal to a child in Poverty for every Grubby recipe kit we sell.

We stock our unique vending machines with a different fresh batch of recipe kits each day and we take care of all the daily restocking, whilst ensuring no fresh produce ever gets wasted and is eaten by someone, somewhere through the fantastic waste food partners that we engage with.

All of which will help reduce UK food waste, improve the nations well-being and promote sustainable British farming.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PARALLEL FOOD BRANDS LTD	Virtual Restaurant and Delivery Brands	£94,177	£88,526

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 hospitality sector employs over 3.2 million people, represents 10% of UK employment, 6% of businesses and 5% of the UK's GDP. The sector is a major contributor to the UK economy, generating in excess of £130bn in economic activity. Hospitality is the 3rd largest private sector employer in the UK.

The Hospitality sector is in top 3 worst effected sectors of the UK economy due to the Covid-19 pandemic. COVID-19 has had a major impact on hospitality sector as a whole and has led to the loss of 19,000 jobs in the industry as a direct result of the virus with these numbers expected to rise substantially as we draw closer to the end of the government's furlough support scheme in October.

The scope of this competition is to help all sectors of the UK recover, grow, and create new opportunities from the aftermath of the global health pandemic. Our proposal looks at a number of areas that have been affected within the hospitality sector and specifically how we can stimulate growth in the sector across the UK so that employment levels are not further negatively affected, and we can return and grow to beyond pre Covid-19 levels.

Parallel Food Brands are looking to develop and test a model that would address the difficulties in creating a food brand and make it something that individuals and companies can take to market in a quick, low costs fashion through a licensing model allowing businesses to, very quickly, add incremental sales to existing businesses or encourage the formation of new business with a ready for market package.

By utilising existing, spare, commercial kitchen capacity in food businesses such as restaurants, hotels and pubs operators will be able to prepare multiple delivery brands from the same venue. By removing the high cost of developing and launching food brands operators can drive increased revenues through incremental sales or new revenue streams.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PROSPER 4 GROUP LIMITED	Getting Britain back to work Post COVID - Expanding the Grand Challenges	£107,638	£86,110

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

Prosper 4 Group, an innovative UK social enterprise, is aiming to get thousands of unemployed marginalised people into work, and using digital technology to do this. We are all about inclusion and creating opportunity.

COVID has produced a massive group of marginalised people - those made unemployed through no fault of their own. These people join others experiencing disadvantage through characteristics such as age, family and caring duties, neuro-diversity, and long-term unemployment.

Our solution is perfect for helping them into employment, inclusively.

During this unprecedented situation, everyone is affected, with many Companies releasing staff. However, numerous Companies are still hiring, with thousands of current job opportunities; more companies will follow as the economy re-opens. And marginalised people make great workers: they need to be represented and promoted, and not forgotten.

Until now, the focus of Prosper 4 has been on employment for ex-offenders. We are now supporting all excluded people, including the Over 50s, Women returning to the workplace, ex-Military and young people.

By harnessing the power of a job, we are providing the opportunity for thousands of marginalised people to become socially mobile, and reduce their dependence on state support.

Prosper has been operating successfully for 6 years. We have created a new Careers Portal ([\[https://BridgeofHope.careers\]\[0\]](https://BridgeofHope.careers) ) where Employers and Jobseekers meet seamlessly. We are promoting '000s of fresh job opportunities daily, to large targeted groups often excluded from employment.

Access is free for ALL JOBSEEKERS to browse & apply to immediate vacancies across the UK, in those Essential Services roles including:

\\*Food production, Farming preparation & home delivery

\\*Retail -- operations and supply-chains?

\\*Logistics of online shopping?

\\*Health/Medical services & supplies

BridgeofHope.careers is a game-changing Careers Portal, supporting those in society who are, or feel, excluded. Prosper 4 is changing things - inclusion, diversity, and social mobility - for the better. We are utilising our innovative and secure IT expertise, including leveraging the latest advancements in A.I. technology. We work ethically, with honesty and integrity; we have the courage and resilience to push boundaries; and with creativity and innovation.

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

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Our technology and segmented target markets therefore support and deliver the Government's 'Grand Challenges' initiatives.

Ultimately, our goal is that Prosper's activities will be measured as a critical contribution to resolving business and socio-economic issues -- including the U.K.'s employment sector, by balancing technological innovation with positive disruptive strategies.

[0]: <https://bridgeofhope.careers/>

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RECYCLE2TRADE LTD	LEMIP - Landfill Emissions Monitoring Intelligence Platform	£119,122	£97,680

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

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

## Project description - provided by applicants

According to the Clean Growth Strategy 2017, exploring new and innovative ways to manage and reduce emissions from landfills is one of the Clean Growth Innovation Challenges.

This project aims at helping detect and reduce methane emissions from landfill sites, as well as better manage fire risks from waste treatment facilities, towards a positive impact on climate change, air quality and the environment. Underground fires, emissions in the atmosphere and other perils originating from landfills and other regulated sites are an inherent source of danger for human life and the environment, and impose significant costs on managing those sites in terms of property, business and reputation damage.

Losses are also incurred by insurers from claims relating to fires, as these are substantial as compared to the insurance premium paid. Consequently, the appetite of insurers to provide cover is diminishing and this could have profound implications for landfill operators as well as for their customers.

We are developing a cloud-based data intelligence platform to help prevent damages for waste treatment site operators and reduce risks for insurance and asset prevention companies. That will be achieved through near-real-time monitoring of these regulated sites. An alert system that notifies users upon potential fires or gas leaks will be developed through space and ground integrated data, this will be managed by the user through a web-accessible customised dashboard.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CROSS DIGITAL LTD	Agora AI Care Services Hub	£97,034	£97,034

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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) pandemic has delivered a profound shock to the Care Industry in the UK and globally. Social care, weakened by years of declining real-terms public funding and rising demand, has been reeling from the impact of the virus, with many users and staff unprotected, fatally vulnerable and poorly accounted for.

The industry as a whole including care providers (domiciliary/residential/nursing), suppliers, charities, donors and sponsors, have not been able to carry out business as usual due to the financial, social and physical constraints enforced on them by COVID-19.

Individual users, especially the elderly and their representatives, requiring care services do not have the ability to fulfil their needs. Users include: care users, family/friends, GP's, charities, care homes/managers, domiciliary care, councils, etc. Commercial users servicing the needs of people within the industry have limited resources to access care solutions/services/products and attract new clients.

There is an urgent need to provide relevant and pragmatic outputs in the form of digital reports & personalized recommendations which will improve care delivery by offering effective access to industry-leading, environmentally friendly, efficient and transparent care solutions/services/products based on user/community-driven feedback.

Cross Digital Ltd will create AI-powered software which uses assessment tools to build a total care solution that empowers users to take control of their care needs and the care industry to connect with customers/suppliers.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
AUTONOMOUS MANUFACTURING LTD	Smart Distributed Production: Usage of Machine Learning to minimise delivery routes	£98,371	£98,371

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 summary\*\***

The crisis caused by COVID-19 has significant impact on global and UK supply chains, disrupting production and shipping alike. One result of this disruption is, that over 90% of businesses expect a significant onshoring of activity ([<https://www.theengineer.co.uk/poll-pandemic-reshoring-uk-manufacturing/>][0]) and Additive Manufacturing (AM) is one solution to a successful onshoring ([<https://eandt.theiet.org/content/articles/2020/05/onshoring-in-the-post-coronavirus-future-local-goods-for-local-people/>][1]).

A key challenge is the fragmentation of the AM Market, where over 50% of the market is split between thousands of small, highly specialised Service Bureaus ([<https://amfg.ai/the-additive-manufacturing-landscape-2020-report/>][2]), often in remote areas of the UK. To aggravate the matter, these Service Bureaus form loose partnerships among each other, routing parts from A to B and back, resulting in repeat journeys which would be avoided if handled centrally.

This leads to inefficiencies in the delivery process, which requires a central solution to overcome. As a direct response, Autonomous Manufacturing Limited (further called AMFG) will offer the market a solution that offers:

1. Intelligent Packaging of multiple parts and orders
2. Intelligent Part Routing between Service Bureaus
3. Intelligent Delivery planning

[0]: <https://www.theengineer.co.uk/poll-pandemic-reshoring-uk-manufacturing/>

[1]: <https://eandt.theiet.org/content/articles/2020/05/onshoring-in-the-post-coronavirus-future-local-goods-for-local-people/>

[2]: <https://amfg.ai/the-additive-manufacturing-landscape-2020-report/>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TAPSOS LTD	Digital 999 for Domestic Abuse	£99,990	£99,990

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 there has been both an increased risk and significant challenge to services responding effectively to people facing Domestic Abuse.

Pre-pandemic, contacting the Emergency Services for Domestic Abuse was already a problem in urgent need of addressing. The global crisis has only worsened this issue and evidence of heightened Domestic Abuse during national restrictions has been concerning but perhaps not surprising. It can be assumed that the statistics being shown only represent a fraction of the abuse happening, as many victims are unable to seek help.

TapSOS technology has the opportunity to provide victims with a communication tool, allowing for discreet, non-verbal alerting - an option when calling 999 isn't safe. Different to the 'Silent Solutions' system, TapSOS doesn't require a victim to call 999 then press 55 to signal to a call handler that they can't speak. This action may potentially put a victim in more danger if any noise is triggered.

TapSOS technology will not only be a tool for victims, but can be used as a method for anyone when reporting signs of Domestic Abuse. This can be an intimidating process, and one which TapSOS want to alleviate.

We will partner with UK Police forces to scope, develop and test our technology to ensure there is an alignment of service provision and service need. We will collaborate with a University to conduct research and studies during user testing.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
VENTIVE LTD	Creating Safer Indoor Environments	£99,397	£99,397

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

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

## Project description - provided by applicants

Keeping Indoor Environments virus-free plays a key part in reducing or slowing the transmission of many airborne infections. Since viruses have an approximate diameter of 150 nm, they can be easily carried by aerosol droplets in the air and linger for many minutes and sometimes hours. Therefore, inappropriate or inadequate ventilation strategy can dramatically increase the risk of disease transmission. Adding UV filters to ventilation systems (such as recirculating ventilation and Air Conditioning systems - a vast majority of systems in operation) can't fix the problem - they still pose a great risk of infection spread as they push air deep into rooms they operate in (\_COVID-19 Outbreak Associated with Air Conditioning in Restaurant, Guangzhou, China, 2020\_). Ensuring that the contaminated indoor air is immediately and effectively removed is essential to enabling the UK to start returning to economically or educationally productive activities. This will be just as important after the lock-down since further waves of infections as well as possibility of future pandemics are now anticipated.

As much as the ventilation approach won't prevent direct contact between the inhabitants which is proven to also spread infections it can substantially slow down the rate of infection by not only limiting air to person transmission but also by reducing the air to surface settlement (due to it's focus on effective air removal) which has been observed as the main Coronavirus transfer mechanism. Ensuring that the air movement through occupied spaces (between occupants) is dramatically reduced and that the 'personal air' is effectively and efficiently removed will make Indoor Environments significantly safer to use, by both flattening the curve and helping offices or schools to remain functional. Ideally, during times of increased risk, the proposed ventilation system would be able to increase the air exchange rate. The proposed project will research this area to arrive at deployment ready Covid-19 safe ventilation solutions for high occupancy buildings such as schools or offices.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Cyberselves	Re-imagining sustainable communications through robotics telepresence	£98,417	£98,417

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

This project will generate a beyond-state-of-the-art robot telepresence system that will enable people to visit remote locations and interact with others by operating a robot body using virtual reality and wearable computing interfaces. Users will see through the robot's eyes, hear what the robot hears, and will be able to control the robot's movements in its environment, including the movement of arms and hands. This technology will make use of cloud computing and low-latency 5G communications to provide a compelling, immersive and user-friendly experience that will be as close to 'being there' as is possible without actual travel.

We are targeting market opportunities in property management, exhibitions and conferences, and telecare, all three of which are sectors that have been substantially affected by the COVID-19 pandemic, and its ensuing impacts on travel and personal contact. These industries are also facing increasing challenges in order to become more environmentally sustainable. Immersive telepresence can provide alternative ways to view and manage properties, meet people and attend public events, and provide forms of healthcare that are safe, low-carbon, and sustainable. We are committed to inclusive technology development and will consult with users with physical and sensory impairments in to order to create accessible and affordable solutions to immersive telepresence that operate across a range of commercially available robots.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
EXPLAIN MY PROCEDURE LTD	Animation Supported Consent in Healthcare	£99,721	£99,721

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 has created new barriers to medical communication at the time it is needed most. Face-to-face explanation of medical treatments is now limited and has been largely replaced by remote consultation using phone and video. Patient understanding of their illness and treatment was incomplete before COVID and is now set to worsen further with this unplanned change in the delivery of healthcare. Patients feel vulnerable and hospitals exposed. At the same time, the reduction in face-to-face contact has the potential for environmental benefit with reduced travel and carbon-miles. Innovation is needed to improve communication before consent to treatment and at the same time support this potential avenue for decarbonisation -- helping patients, hospitals and the environment in one go.

Explain my Procedure is a multi-language online platform for digital animations that supports medical communication and has been shown to improve understanding of the benefits, risks and alternatives before heart procedures ([www.explainmyprocedure.com](http://www.explainmyprocedure.com)). The technology is now being developed across specialties to serve healthcare workers, patients and their families in the challenging post-COVID world.

Explain my Procedure animations will facilitate understanding of treatment options and the surgical procedures in the areas of cancer, orthopaedics and surgery to complement the cardiovascular service that is already available. The animations will be available in languages that can be selected by the user on an online web-platform to bridge the communication gap between hospital staff, patients and their families - a gap that has developed due to the pandemic and will, in the absence of such innovation, be an enduring legacy of it.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BORN MAVERICK VEGAN BEVERAGES LTD	Developing Atlantic Seafood Alternatives From Seaweeds Within NI Through Sustainable Reverse Engineering Techniques Following Post Covid-19 Trends	£69,066	£69,066

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

Two of the burning issues of our time are how to reduce CO2 emissions and sustainably feed the forecasted 10 billion population by 2050 and the current model of producing just won't work moving forward. We at Born Maverick aim to redefine food innovation by exploring newer sources within eco system by developing sustainable food solutions within UK. We are willing to get into the roots of what causes overall disruption of supply chains and provide sustainable solutions. The over-exploitation of particular species needs to be stopped and we need solutions which would help maintain ecological balance in the system. Hence we have started to target species which are underutilised as compared to their natural production and turn them into our favourite edible products where consumers don't have to compromise on overall taste, texture and compatibility while being kind on nature and species besides being able to stay healthy in an ethical way. We have already developed unique plant-based milk, multi nutritional blend and uniquely fortified popsicles and this project is our further attempt to contribute towards creating a sustainable model post COVID-19\.

Seaweed is naturally available within NI in abundance and is sustainably harvested through local farms. This is a least explored source of sea food when it comes to developing unique seafood alternatives despite the fact it carries immense nutrients and health benefits which could be used to form both edible and ethical food structure. Given the implications of Post-COVID-19 and rising trend of plant based diets has made it a basic necessity to develop food supply chain system within close proximity which would help us sustain and provide high quality locally sourced food to consumers in a continual way even during disrupting times and to generate exports of high quality innovative food in long term. There is an ever-growing appetite for seafood alternatives but the lack of innovation in this field as compared to milk and meat alternatives has hindered the rise of this particular segment when compared to the overall growth of plant-based products. The seafood alternatives currently present within the market are a random combination of soy, pea, rice and other grains formed in a shape of shrimp which questions the sustainable choice of consumer shifting to plant-based diet from actual seafood in long term. Our project aims in overcoming these shortcomings by providing solutions through reverse engineering technology and in a scientific way.

In this project we aim to identify potential variety of edible sea weeds within NI which have nutritional configuration similar to prawns through reverse engineering methods and then constructing taste, texture and compatibility similar to prawns found in the oceans around UK. We would then identify process to optimise the upscaling of these products through sustainable packaging and shelf life development in order to deliver a final finished product. This would all be delivered over a time frame of six months by collaborating with the expertise within food research organisations which will be strategically contributing towards different phases of 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INFI-TEX LTD	E-textile solution for the early detection and prevention of pressure sores	£80,220	£80,220

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 PUBLIC HEALTH THREAT AND A MASSIVE BURDEN ON HEALTHCARE SYSTEMS\*\***

Pressure ulcers (PU) develop when a large amount of pressure is applied to an area of skin over a short period of time. The extra pressure disrupts the blood flow and the affected skin becomes starved of oxygen and nutrients, which causes it to break down and ulcers begin to form. Most affected are those aged over 75 as their skin becomes thinner and frailer. They occur in people confined to a bed or a chair. PU represent a major burden of sickness and reduced quality of life for people and their carers.

PU affect up to **\*\*2.5 million people per year\*\***, and related costs range from **\*\*£1.4 to £2.1 billion annually\*\*** in the UK (4% of total NHS expenditure) and from \$9.1 to \$11.6 billion annually in the US. Cost drivers in the treatment of pressure ulcers are: nursing time for wound care, nursing time for patient position changes, wound dressings, and other advanced wound care products (specialty beds/mattresses, creams, ointments, antibiotics to treat blood poisoning-sepsis, cellulitis, osteomyelitis), surgical debridement/treatment: high pressure water jets, ultrasound, surgery with/without anaesthetics as well as various surgery related risks: infections, abscesses, deep vein thrombosis,...). Complications from PU include pain, scarring, infection, prolonged rehabilitation, and permanent disability. PU can lead to life-threatening complications such as blood poisoning or gangrene and can be very debilitating for the patient.

**\*\*95% of PU\*\*** are largely preventable. As the population ages, the percent of people at risk for developing PU is growing exponentially, thus increasing **\*\*the demand for early stage detection and prevention\*\***. Current strategies for the prevention of PU are repositioning and use of costly low friction bedsheets or gel/air filled mattresses. Evidence to support the use of a standard repositioning regimen to prevent pressure ulcers is low and optimal positions or repositioning frequency cannot be generalised as they can vary a lot from a person to another.

In this project, Infi-tex aim to develop the first smart bed underlay capable of continuously measuring and recording pressure forces and sending the data to a smartphone to alert the companion app of pressure distribution. Our technology will allow for a specific early detection of PU before any visible sign develops and send notifications to the patient or carer to deal with it before it progresses any further.

Infi-tex will use its proprietary conductive ink printed onto a textile sheet to develop, prototype, test /optimise and validate the first smart bed underlay capable of detecting change of pressure ( movement ) or lack of movement to prevent formation of Pressure Ulcers.

Infi-tex is aiming to develop an affordable , simple and user-friendly product that can be easily adopted by care homes, hospitals and individuals.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 COMPOSITES LIMITED	Natural fibre bio-composite hand sanitiser station (specifically designed for areas of high footfall)	£99,940	£99,940

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 result in the development of a prototype hand sanitiser station specifically designed for areas of high footfall and manufactured from sustainable natural fibre composites with significant environmental benefits. It will also play an important role in Creative Composites ambition to be the leading UK natural fibre composites manufacturer with a global reach in this developing marketplace.

It has always been an ambition of Creative Composites to develop its own product. However, the impact of Covid-19 on our business has constrained resources for research and development. The proposed hand sanitiser station project provides us with both a product that addresses the health and welfare concerns with a solution that has a strong beneficial impact on addressing sustainability and environmental impacts. Not only will this project benefit our business it will play an important role in the reopening of live events to the public, helping to assist stadia, arenas, concert halls and conference centres to return to business and welcome back live audiences.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
UHURA SOLUTIONS LIMITED	AI-powered legal sector productivity enhancing solution for post Covid-19 response	£99,766	£99,766

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

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



## Project description - provided by applicants

Uhura Solutions is the developer of advanced software products that are able to "read" and understand documents. The company aims to develop tools that can read legal agreements and critically analyse important parts, such as clauses, that have important implications for the relevant parties. Interest in this product has jumped over recent months because of the Covid-19 pandemic and the role of force majeure or "act of god" clauses that alter parties' obligations and/or liabilities under a contract when an extraordinary event such as Covid-19 occurs.

As a result of Covid-19, many thousands of contracts will have to be reviewed and resolved between the respective parties. Consequently, there are thousands of parties that need to review large quantities of legal agreements. For many people the costs of accessing legal services are out of the question. Law firms are also facing massive demand for their services because the enormous quantities of legal agreements will have to be reviewed, revised and/or resolved.

Uhura Solutions is focused on the development and commercialisation of AI software that is able to review these agreements and provide automatic identification of the high risk clauses in a body of contracts.

At present Uhura has been able to develop a proof of principle of this AI solution, the application is able to read contracts and identify a small number of force majeure related clauses. To become commercially viable, the solution needs to understand a higher number and range of clauses. This project is focused on "teaching" the software to recognise a far broader range of agreement clauses and improve an AI engine.

The enclosed project enables the business to complete a short programme of research and development, despite the Covid-19 restrictions, to ensure the AI system can automatically understand the contracts. Furthermore, this project allows the business to access legal experts at one of the countries most respected international law firms.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 MOTORCYCLE CONCEPTS LTD	V-Duct - City Motorcycle	£99,796	£99,796

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 proof of concept aerodynamic device, incorporated into a city motorcycle that under real world conditions, will deliver significant advantages over current production models, enabling electrification. The working demonstrator will show that the design addresses current aerodynamic inefficiency, vastly improving range and enhancing the potential for heat exchanger cooling. In addition, the new design will incorporate some parts manufactured from recycled plastic, will deliver improved safety performance through enhanced stability at steady state motion and even more importantly in the braking phase and reduce inner city particulate emissions generated from exhaust and brakes.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GIBSON TECHNOLOGY LIMITED	Electric generator engine to support Electric Vehicle recharge solution	£91,177	£91,177

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

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

## Project description - provided by applicants

Gibson Technology is a world leading manufacturer of high performance racing engines, dedicated to delivering exceptional quality and innovative engineering solutions. Gibson has created a global reputation for excellence in both performance and reliability in designing, developing and manufacturing race systems encompassing engines, electrical drives and electronic systems.

Gibson's experience has developed into an enviable track record in solving complex engineering challenges for customers and race series worldwide and can be attributed to its highly skilled and committed workforce, with many years of experience at the highest levels of motorsport.

Following the UK Government's Net-Zero carbon emissions target and the automotive industry move towards electrification, Gibson has sought to diversify to protect its future. Capitalising on their expertise and skills, Gibson will leverage its existing capabilities to design, development and manufacture a range of portable, light-weight, high power advanced electrical generators for applications including off-grid electric vehicle recharging.

Gibson has previously developed a proof of concept generator weighing just 40 kilograms and producing 10 kilowatts of power. Gibson are confident that further miniaturisation is possible to produce a generator weighing just 30 kilograms. This highly efficient and portable electrical generator will be more compact, lightweight and power dense than anything else currently available on the market.

Gibson have undertaken extensive market research to fully understand the potential applications for their portable generator. Due to government legislation and public opinion, the market and demand for this product is increasing, in particular, the roadside recovery industry needs a solution to recharge stricken Electric Vehicles (EVs). Gibson have identified other markets which include power generation for crisis response teams, domestic power for power grid disruption and military applications.

Roadside recovery services currently do not have a lightweight solution to produce the power necessary to recharge an electric vehicle and often utilise a flatbed truck to transport them away.

The initiation of the project to develop the engine aspect of the generator has been impacted the Covid-19 pandemic and subsequent lockdown. Over the lockdown period, the motor races that provide Gibson's income stream were either cancelled or rescheduled to later in the year impacting revenues and leading to staff being furloughed.

The Sustainable Innovation Fund will allow Gibson to initiate the engine project and complete their first generators providing roadside recovery companies and EV drivers with a solution for recharging stricken EVs. The solution will support the UK Governments Net-Zero carbon emissions target by reducing carbon emissions caused by the use of flatbed trucks and reducing range anxiety amongst potential buyers supporting an increase in EV sales.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PUPIL PROGRESS LIMITED	Enhanced Grade Calculation & Prediction Accuracy for Teachers & Students in Covid-19	£94,708	£94,708

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 massive impact on the UK education system, perhaps most visibly with the cancellation of the 2020 examinations and the subsequent confusion and uncertainty over the award of exam grades to individual students.

The issues associated with teacher predicted grades and the loss of teaching time leading up to the examinations haven't gone away, the system needs to be better prepared for 2021, and potentially beyond.

This project is a direct response to what teachers, schools, Exam Boards and the Department for Education need going forward.

I founded Pupil Progress as an experienced teacher frustrated by the lack of software tools to make the monitoring of individual student attainment more straightforward and intuitive. Most teachers use poorly designed EXCEL spreadsheets which are inflexible and make department/school data aggregation difficult. Covid-19 has exposed weaknesses in the procedures used to predict grades and the accuracy of those predictions compared to the exam results.

Pupil Progress is particularly relevant in the exam years. Schools select the Exam Board curriculum they will follow for each subject. Exam Boards publish guidelines for how teachers should evaluate the students and also the criteria they will be assessed against. The school provides a 'predicted grade' for each student for each subject, based on their performance in primary school assessments (typically SATS). Teachers currently use spreadsheets to try and ascertain the student's current grade mapped against the Exam Board criteria. Teachers are striving to see how students are progressing against their predicted grade.

The tracking process is complex, especially where instructions have needed to change in response to the pandemic. The Exam Boards have had to issue new instructions to take into account missed course work, assessments and practicals. Teachers use their 'professional judgement' to estimate grades, but it is easy to make optimistic assumptions. The use of teacher estimated grades in 2020 has led to significant grade inflation. The use of crude algorithm moderators to balance the national statistics was unfair to many students.

We have designed our Enhanced Exam Grade Calculation and Prediction product as a direct response to the thousands of teachers that we support and to provide more timely accurate data nationally to inform Exam Board actions and Government policy.

Our proposed solution:

- \* Provides intuitive trackers to assist teachers in monitoring pupil's progress.
- \* Automatically updated for any changes in the Exam Board guidelines
- \* Internal checking to highlight unrealistic grade predictions
- \* Well documented pupil attainment information to support any appeals
- \* Ease of data collation and analysis at department and school level
- \* Potential for aggregated real-time student grade data for the national bodies to assess the impact of Exam Board and policy interventions

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

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

New SAAS product to be delivered through our existing Pupil Progress platform to enable rapid roll-out and scalability - the solution is needed this year.  
The proposed development and deployment has been designed for minimal environmental impact with all school interactions handled remotely.

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



## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EQUITAS APP LTD.	Rapid digitalisation of recruitment in the UK & Ireland healthcare sector	£76,552	£76,552

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

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

## Project description - provided by applicants

Equitas' vision is to digitally transform the recruitment process in the healthcare sector in the UK & Ireland as Covid-19 has forced the industry to change the way they hire at scale.

In this new world of work, many companies prepare to face another recession and with growing unemployment, healthcare providers will be under increased pressure to ensure their services and staffing levels are not impacted by these external pressures and further crises. They also need to ensure that they build diverse and inclusive workforces that represent the communities that they serve using fair hiring practices. This project has the following objectives:

1. Development of remote interview software allowing a smooth transition to remote hiring within the healthcare sector throughout the Covid-19 pandemic
2. Development of an open API to allow for seamless integration with Applicant Tracking Systems (ATS) or large candidate databases currently used by healthcare providers to manage candidates when they apply for a role allowing quick adoption within the sector
3. Development of a "Future of Work" competency framework for the healthcare sector as they transition into new ways of working and need new methods to assess candidates
4. The ability to collect demographic data from both interviewers and candidates to track diversity statistics and ensure fair hiring practices
5. The ability to ID check candidates pre-interview remotely in a digital waiting room to ensure compliance
6. The assessment of the impact Equitas interview software has on the diversity of hire within the healthcare sector from entry-level through to board level with diversity statistics
7. The assessment of time-saving on the administration tasks of interviews and how that time was spent more effectively on engaging with candidates and assessing them.

Equitas App Ltd. is one of the UK's first voice-led interview software providers. They have developed revolutionary interview software to address the challenge of bias in the recruitment industry using a digital approach. The current product offers a best practice approach to interviewing, automating key parts of the interview process to reduce the cognitive load of interviewers in order to reduce bias.

Equitas has built strategic partnerships with HR Technology providers in the healthcare industry over the last 12 months. This project would focus initially on two hospital groups and with two care home groups across the UK and Ireland. Post-project it can be rolled out sector-wide.

Equitas' innovation will be enhanced through:

1. Remote delivery of interviews in one secure platform
2. Realtime ID checking prior to interviews
3. Improved ability to track demographic information to impact diversity and inclusion
4. Promotion of new best practice, fair, structured hiring practices in the healthcare sector

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Digital Propensity & Impact Analysis Model	£66,864	£66,864

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

Up until now, a significant amount of transport infrastructure investment has been focused on getting people from where they live to where they work, or from where they work to where their customers are, in the fastest time possible. An alternative to this is investing in high quality, reliable digital connectivity so that employees, employers and their customers can interact from anywhere in the UK, without the need for physical movement. The challenge is therefore in striking the right balance between transport and digital infrastructure investment to ensure the greatest impact in unlocking and leveling-up opportunities for the entire UK.

This project looks to solve this challenge by providing a first-of-a-kind model to evaluate digital connectivity, transport mode choice, employment and geo-demographic data in unison. In doing so, users will be able to fully visualise the relationship between where people live, where they work, how they travel there (if they travel at all) and how well they are digitally connected. From here, the model can be used to highlight regions or demographics where home working is being restricted by a lack of digital connectivity, or where transport infrastructure investment may not be required due to high levels of home working (i.e. a reduction in demand as a result of the shift to home working).

In doing so, this project will capitalise on and cement the shift to home working as a result of COVID-19, resulting in significant environmental and social benefits.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	SusTain-TB (STTB)	£97,728	£97,728

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

Recovery of EOL tooling to create a circular economy.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INNOVATIVE MATERIALS LIMITED	ULTIMATEM - ULTra high throughput MAterial processing for ThermoElectric Materials	£96,215	£96,215

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

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

Project description - provided by applicants

ULTIMATEM will deliver novel sintering technologies capable of producing a range of thermoelectric sintered materials with zero porosity at industrial scale. These will be applied to manufacture the next generation of thermoelectric energy harvesting devices and thermoelectric 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ANEMOS TECHNOLOGY LIMITED	Prototype and pilot trials of an automated XY stage with software for low cost, modifiable, automated microscopy to benefit healthcare, research and the community	£97,916	£97,916

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 concerns prototyping an innovative low-cost computational microscopy system, using commodity components and providing an open software framework. It will help the NHS, medical researchers and community groups by making automated microscopes available at a much lower price point. It will help the environment by reducing the number of motorcycle couriers with medical samples. It will enable innovative medical research by providing a platform where users can modify the software themselves, without going back to the vendors.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PROTECTBOX LTD	ProtectBox - Security for all that Builds Back Better: iterating existing B2B Cybersecurity Comparison Website/Marketplace for B2(B2)C, B2G/I	£99,850	£99,850

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

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

## Project description - provided by applicants

Every day we hear about another cybersecurity attack, but an increasing COV-19 woe for most small & medium businesses (SMBs) has been an increase in cyberattacks, with cybercriminals exploiting the change to remote...amplifying an existing problem of trying to buy cybersecurity (if it's not thousands of pounds & months wasted with a consultant then it's the headache of jargon, or both) with misinformation and exploitation.

So SMBs now need a quicker, simpler & affordable way to buy cybersecurity, more than ever! Cybersecurity Comparison Website & Marketplace - ProtectBox - lets SMBs (anywhere in the world) in an hour for free, online, find & buy all their cybersecurity in 1-place by filling out a simple online questionnaire with lots of friendly no-jargon features to help, then compare bundles & pay in 1-click. Whether they're technical or not! We can easily extend the existing B2B Security Marketplace to B2G/I(nfrastructure) and B2(B2)C iterations, which our Partners are working with us to do.

We also take away the pain for Cybersecurity suppliers selling to SMBs by not just generating them leads (at a hugely inflated COV-19 subscriptions) but actual sales at fair (pre COV-19 & benchmarked to the rest of the market) commissions. COV-19 has accelerated a correction in the cyber-supplier market, making ProtectBox best placed to support them too.

We've multiple income streams of re-seller fees from SMBs, subscriptions from SMBs & Suppliers & in-license/white label fees. In same way, banks sell insurance as add-on, ProtectBox can be sold as all-in-one cyber add-on by accountants, banks, insurers, lawyers, telecoms, even governments. 4 on-boarded, 100 in pipeline. COV-19 has increased partner traction, an insurer has agreed in principle half our 2020 Sales to bundle us into their services. Top Payment provider & Ethical FinTech marketplace discussing similar bundling and iterating to B2(B2)C. Governments and Defense behemoths interested in new B2G/I. Hospital & Waste management not-for-profit interested in converting our award-winning Security AI to work as an 'AI Marketplace as a Service' for their non-Security products.

We can offer what we do by being a lean team but with the right skills -- all of CEO Kiran Bhagotra's career has been about winning hearts & minds, most recently in the Cabinet/Foreign & Commonwealth Office. She is supported by Product Lead Incisive Edge (Sales/marketing aficionados); Commercial Leads Ben Brabyn (Government & industry ecosystem expert) & Brett Hurl (Sales & Telecoms serial entrepreneur). Plus Data Leads/Development team with 10+ years experience across all the B2X markets that this project would develop. We're all for girl power & inclusive, sustainable leadership to Build Back Better!

As a result, we've won 8 Awards, including CogX 2020's Best AI in Cybersecurity; 2020, 2019 & 2018's Most Influential Women in UK Technology longlist; Wired Security 2017 with coverage in The Times, Telegraph, Wired, CityAM, Evening Standard amongst 30+ others. Help us help you! Sharing is caring so spread the cyber love by joining the ProtectBox family today by signing up at [www.protectbox.com](http://www.protectbox.com), following @ProtectBoxLtd, partnering or investing & MayTheProtectBoxBeWithYou!

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	AssistAble: Sustainable Smart Home for Healthy Independent Ageing	£98,424	£98,424

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 led to wide-scale disruption in the NHS, worsening delays in routine care, increasing costs and reversing efforts to improve sustainability. The elderly have been disproportionately affected, with increased social isolation and reduced mobility, leading to reductions in mental and physical function that may never be recovered, with barriers to healthcare access increasing for vulnerable and minority groups. Digital transformation is urgently needed to meet COVID-19 related challenges, whilst maintaining current care standards in the face of a rapidly ageing population. Independent living improves life satisfaction and happiness whilst reducing pressures on the NHS and social care, and is a UK Government priority targeting 5 extra years of independent living by 2035. Sustainability and carbon reduction in healthcare is a key part of the Government's Clean Growth Strategy; with the NHS being the largest contributor of public sector carbon emissions, significant reductions can be achieved by improving/increasing uptake of remote healthcare.

Frailty is the key condition leading to loss of independence, affecting 10% of people aged over 65 years and 50% of those over 85 years old, with increased prevalence in ethnic minority groups. Frailty can be accurately assessed by measuring walking speed and the time it takes to stand up from sitting, but these are not typically measured in a busy clinic and diagnosis is often based on subjective clinical opinion. Reduced walking speed directly relates to increased risk of falls, hospital admission, nursing home residence and early death. Appropriate early interventions can reduce and reverse frailty and increase disability-free life years.

AssistAble exploits recent advances in machine-learning/AI enabling accurate assessment of body movement using a simple webcam, giving information and trend analysis of walking speed, instability, and the time it takes to stand up from sitting. This information will be used to accurately grade frailty and improve clinical care by sharing outputs with doctors, nurses, social care professionals and relatives, who can act to halt or reduce frailty, have early warning of acute illnesses, improve care planning, and reduce the frequency of falls.

The vision is to lead smart telecare for seniors, promoting healthy independent living and equitable healthcare access, whilst decreasing NHS carbon footprint from GP/hospital transport and clinical building occupancy by enabling remote elderly care and reducing avoidable hospital admissions.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	WaPiC - Waste Plastics in Chemical recycling	£99,926	£99,926

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

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

## Project description - provided by applicants

Plastics and plastic waste have become a major concern for our society. Since the BBC's Blue Planet programme, the public, media, celebrities, governments, NGOs and businesses have all turned the spotlight on to what happens to the plastics we all use in our daily lives. Despite these high levels of concern UK recycling levels for plastics remain low overall, with the majority being landfilled or incinerated. For some types of plastic, such as flexible packaging, very little of this material is collected, sorted and recycled. In parallel there is increasing demand for recycled plastics, with product manufacturers actively searching for UK supplies of suitable recycled plastics to replace virgin polymer and costly imports.

The WaPiC (Waste Plastics in Chemical recycling) project, delivered by Fiberight, will assess and demonstrate a solution to the plastic problem. Fiberight will amalgamate, sort, and test purification strategies for producing in-demand clean plastic recyclable streams from mixed-waste; helping the UK to increase resource recovery within the net-zero ambition.

Although a necessity exists to increase mechanical recycling of plastics, this pathway has limitations due to; off-take market size, narrow range of end-use applications for the recycle, regulatory hurdles, technical re-manufacturing challenges and public acceptance of waste-derived materials in certain products.

WaPiC will therefore explore the recovery of plastics from mixed-waste streams as a suitable input for chemical recycling and as a complementary technology to mechanical recycling processes. This strategy will enable the recovery and recycling of a larger portion of plastics from residual waste.

Chemical recycling is being seen by many in the value-chain as a way of overcoming the challenges associated with mechanical recycling. Key benefits are: the ability to generate virgin-equivalent recycled plastics for use in a wide range of end-use applications including food contact packaging; and recycling of a wider range of plastic materials (flexible and rigid plastics), for value-added applications.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
VIRIDIAN CONSULTANTS LIMITED	ACME: Asbestos Containing Materials evaluation	£55,823	£55,823

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

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

## Project description - provided by applicants

Viridian is an innovation company supplying nuclear sites with radiometric characterisation tools in support of decommissioning. It has developed a novel laser sampling tool, ViridiScope(r) for use in nuclear characterisation applications and homeland security. It is used for sampling concrete, plaster, brick and other materials that may be contaminated with radioactivity, so that the amount and type of contamination can be quantified prior to decommissioning.

The state of the art for sampling materials for asbestos characterisation is largely manual drilling and scraping, exposing workers to significant hazard and the need to wear extensive PPE including breathing apparatus. ViridiScope(r), which has been proven on several nuclear sites, is specifically designed for sampling highly radioactive material safely, without dust, at height and in confined spaces, so it is ideally suited to sampling asbestos contaminated materials in both nuclear and non-nuclear environments.

This project will test and evaluate the application of ViridiScope(r) for rapid and safe sampling of asbestos containing materials, opening up new markets for Viridian world-wide and helping the company to recover from the effect of COVID-19 that has halted work on nuclear decommissioning sites.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
POLYMER MIMETICS LIMITED	Biodegradable Hyperbranched Polyesters as Scaffolds for Next-Generation Sunscreens	£77,006	£77,006

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

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

### Project description - provided by applicants

Melanoma skin cancer is the 5th most prevalent carcinoma in the UK. Sun protection is a growing world market with more and more consumers utilising sun protection products both while sunbathing or as part of their daily routine against harmful UV radiation. Apply-once protection agents rely upon organic UV absorbers which are under legislative pressure due to their permeation within the skin and their environmental impact. Hawaii has outlawed the most damaging protection agents from formulations with many other territories reviewing their use. By attaching these UV absorbers to pre-formed, bio-sourced and bio-derived polymers the negative impact of these effective agents can be mitigated. This offering will allow the high value speciality polymer additive industry to build-back better with a unique offering to the world marketplace.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
TONGADIVE LTD	Traceken 2.0: Strengthening Healthcare Supply Chain to support sustainable recovery from Covid	£84,649	£84,649

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

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

## Project description - provided by applicants

Tongadive, is a technology startup focusing on solving business problems through software products based data orchestration. Our flagship product, TraceKen, aims to fundamentally disrupt healthcare industry's supply chain by providing a unique approach to track and trace utilizing enterprise blockchain technology.

Tongadive is currently running a pilot project a lead customer, a manufacturer of clinical laboratory testing kits for providing end to end visibility to its supply chain and make it compliant to EU IVDR requirements. The pilot is expected to evolve into full deployment of TraceKen 2.0 at the customer.

The aim of this project (Project) is to enable Tongadive to develop features into TraceKen (TraceKen 2.0) that would provide enhanced functionality helping to accelerate recovery from Covid while at the same time promoting post Covid supply chains to have a cleaner, greener footprint. This would be enabled through development of an Analytics Engine that would make product recalls more efficient while establishing Provenance of Origin on healthcare supplies.

- 1\ Build a first of its kind, robust software combining the power of enterprise blockchain and Machine Learning (ML) powered Analytics Engine
- 2\ Promote green, clean, sustainable supply chain in post-Covid 'new normal' through a product that enables circular economy while saving costs
- 3\ Provide SME manufacturers in healthcare industry a quality product
- 4\ Open up product to be explored for use cases outside healthcare industry where similar end to end visibility and provenance of origin are likely to become the new norm

This Project focuses on the application of new technologies (blockchain, machine learning) to solve existing problems and address gaps in healthcare supply chain. As an extension this product could be a major disruptor in global supply chains across multiple industries.

Project team comprises of Design and Development lead, Data Scientist, Healthcare Supply Chain expert, security expert and Programmers. The team has external support from industry experts in healthcare and product strategy.

To assess and evaluate market or TraceKen (and TraceKen 2.0), four dimensions of market size and growth trends in healthcare are evaluated:

- 1\ Healthcare market
- 2\ Blockchain usage in healthcare
- 3\ Track and trace software trends and demand in the market
- 4\ Current market players

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

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The Project brings significant value for the taxpayer. Tongadive will utilize this funding to help the UK lead in technology that promotes circular economy and sustainable development in addition to directly delivering public good objectives.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
OXFORD BIOTRANS LIMITED	Manufacturing a sustainable and cost effective insect repellent	£98,362	£98,362

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

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## Project description - provided by applicants

The insect repellent field is dominated by synthetic chemical solutions that have a high environmental impact (such as DEET). Many natural compounds have been shown to be active in this arena, but typically are challenging to produce economically at scale, and/or do not have the same efficacy.

One natural compound is nootkatone, the scent and flavour of grapefruit, which has recently been registered by the EPA as an active repellent of mosquitoes, ticks and bedbugs (July 2020). Nootkatone is a natural, food-safe compound currently used in the flavour and fragrance industry, and which as a repellent would have a low impact on the environment. The challenge with using this compound in this market is its high price and relative supply scarcity; even synthetic nootkatone, produced via a process with high environmental impact is priced at \$2,000/kg, while natural nootkatone is >\$3,000/kg, and less than 20 tonnes/year are produced.

Oxford Biotrans has developed a novel biotechnological production route to this natural compound and is currently selling it competitively as a flavour and fragrance ingredient. However, it is now looking to reduce production costs to enable deployment of nootkatone as a low-impact, sustainable, natural insect repellent for fighting disease and agricultural vectors.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
OXFORD NANOSYSTEMS LTD	I-GREEN: Improved Green Refrigeration For A Sustainable Future	£98,718	£98,718

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

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## Project description - provided by applicants

Oxford nanoSystems Ltd (OnS) is a high-tech start-up that has developed a unique coating technology to improve the efficiency of heat transfer. OnS was founded in 2012 and has spent the past 5 years developing nanoFLUX; a nano-coating which dramatically improves the efficiency of two-phase heat-exchangers, such as evaporators. OnS focuses on the air conditioning and refrigeration markets, whose primary benchmark is to reduce the evaporator size to save environmentally damaging refrigerants and reduce production costs.

Oxford nanoSystems acknowledges the UK's drive to push the new climate goals as reaffirmed by the Katowice Climate Conference 2018\ . To reach those, innovative cutting-edge approaches need to be found, especially in an industry which is historically slow in adopting innovation.

For this project Oxford nanoSystems is tackling one major area of application for its technology: heat exchangers for refrigeration systems. Global demand for cooling is constantly increasing with rising temperatures worldwide, but at the same time more energy efficient and environmentally friendlier solutions are desperately needed. OnS will adapt its coating technology for CO<sub>2</sub> as refrigerant in cooling technology. CO<sub>2</sub> is much less harmful for the environment than the commonly used fluorinated greenhouse gases, but poses some technological challenges. CO<sub>2</sub> is generally considered the only sensible refrigerant for the future, because of its low Global Warming Potential of 1 (some common HFC refrigerants go as high as 11,700 times this). Throughout the whole cooling industry all efforts are made to switch completely to CO<sub>2</sub>\ . OnS has a highly specialised team with many years of experience in cooling technology and is confident to be able to overcome these challenges and provide new solutions.

With this project OnS will expand its product range more quickly, with the goal to set up a world class testing facility dedicated production line. OnS will be able to hire additional staff to make the project a success; meaning creating new world class thermal engineering and chemical science jobs in the UK.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
INTERCEDE VENTURES LTD	Aircraft Surface Management Service	£94,871	£94,871

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

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## Project description - provided by applicants

As reported in the media, COVID-19 has had a huge impact on global transportation, with EU passenger numbers down by 90% in April to June 2020 compared with 2019 figures. This has meant many airlines are reporting large numbers of job losses and some airlines across the world collapsing. The means that cost saving is even more critical to airlines than previously and they are looking to reduce fuel consumption as a means of achieving this.

A major producer of carbon emissions, and consequently a contributor to climate change, is global transportation. Encouraged by government legislation and customer pressure, the global aviation sector continues to seek methods to reduce the amount of carbon generated by the industry. Dirt deposits on aircraft exterior surfaces can reduce the ease with which an aircraft can fly through the air and, consequently, increase the amount of fuel the aircraft burns. This may only amount to a few percent, but across multiple aircraft over an extended period the increase in greenhouse gases emitted is significant and the additional costs for an airline can be extremely large.

Working with the airline industry, Intercede Ventures Ltd (IVL), supported by a subcontractor, the University of the West of England, Bristol (UWE), have invented a new system to help airlines to reduce expenditure associated with fuel consumption due to dirt deposits, and consequently, additionally, enhance an airlines 'eco-credentials'. IVL's Aircraft Surface Management (IASM) system provides a complete solution for airlines to facilitate management of the cleaning of their aircraft. It includes a novel analyser to measure dirt deposits on an aircraft's surface (for ease and safety the measurement is performed from the ground, shining optical beams at the surface to be measured), together with software to calculate a cost associated with the fuel consumption related to the measured dirt deposits, in order to determine if cleaning is required. It will also be validated to evidence the reduced carbon footprints for aircraft using the system, which represents vitally important data for airlines in relation new requirements which come in to force in 2020\.

In this project, the surface analyser instrument will be developed and tested on aircraft structures. In addition, algorithms and associated software will be developed to analyse data from the new instrument to indicate when an aircraft should be cleaned. Finally, trials will be performed on working aircraft over a period of 2 months. The trial performed in this project will verify the ability of the IASM service to reduce fuel consumption relative to current standard industry approach, by tailoring cleaning for each aircraft within an airline's fleet.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
POCKET BOX LTD	Development of a unique and innovative vehicle management application providing car drivers with an efficient data management app and automotive businesses with a unique digital marketing and CRM tool.	£90,026	£83,426

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

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Project description - provided by applicants

Founded by Jim Finnegan, Michael Craig and Mark Ireland, Pocket Box is a UK-based SME that aims to provide a smart database solution to consumers and businesses in the automotive sector. Offering backgrounds in senior management, technology innovation and sales, the project's founders intend to develop an app that has the potential to improve automotive data management and digital marketing. In addition to the automotive sector, this innovation should further address environmental problems through reduced paper and generate a year-5 post-project revenue of £12M.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Ghobi Ltd	Accessible navigation and associated opportunities	£99,995	£99,995

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

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Project description - provided by applicants

Development of a data processing platform to facilitate navigation in the built environment, especially by wheelchair users.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
INSIGNIA TECHNOLOGIES LIMITED	The development and application of innovative colour-changing indicators in the healthcare and medical markets	£59,920	£59,920

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

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

## Project description - provided by applicants

Insignia Technologies have been developing time-temperature indicators to improve upon the management and effective use of personal protective equipment (PPE). It is estimated that 129bn face masks are being used during the COVID-19 response each month. This dramatic increase in demand is understandable, but shortages remain of medical supplies like gloves, surgical masks, N95 respirators, face shields, gowns and aprons. Over the coming months, the supply chains will increase manufacturing to meet the rising global demand, however it is necessary to implement rational and good management systems to ensure effective and practical use of PPE supplies. Insignia has developed an innovative solution which would assist in managing the rotation of PPE and help prevent overuse. It has developed an indicator that changes colour over a pre-set time period which will visually indicate when the product is required to be changed.

This project intends to develop a range of new label constructions to provide a series of necessary timings along with performing essential verification work. In addition to the technical aspects of this project, work will be carried out to assess the potential market size, and expansion of customer base. Time will be invested to understanding the key timings necessary to fit within the recommended guidelines for different equipment types, which can be discovered through conducting research and speaking to customers.

This implementation of this innovation will result in a monitoring system that helps with the management of PPE and aid staff in using it effectively.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MY-DIGITAL LTD	Development of a Fully Digital, Consumer-Safe, Environmentally Conscious, Contactless Receipt Management System	£85,328	£85,328

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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-Digital is a UK-based SME targeting the sustainable payment innovation market. My-Digital's COVID-19 safe NFC and Bluetooth contactless digital receipt management solution offers a safer, easier, and environmentally conscious way for retailers to generate receipts for customers, removing the need for paper receipts. My-Digital was founded by Sujay Gupta, Paul George, Goutham Shrikrishna and Siva Prasanna. The team has extensive experience in creating and managing start-ups and IT solutions. We predict a year-five post-project revenue of £7.3M for My-Digital.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CARBOGENICS LTD	CreChar AD - sustainable solution for waste management decarbonisation	£97,964	£78,371

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

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

## Project description - provided by applicants

Anaerobic digestion (AD) is a complex biotechnological process used to convert organic waste, such as food waste, unusable parts of plant crops and other farm-generated wastes as well as municipal wastewater into valuable biogas. Biogas is a renewable fuel with the potential to replace the natural gas necessary to heat our homes and power our industry.

However, as any biological process AD is difficult to manage. Changes in feedstock type and quality present risks and can lead to complete process failure, which causes substantial losses in revenue and energy production, Most of the AD plants in the UK are currently working at maximum 65% digestion efficiency.

During the COVID-19 pandemic, it became evident how important the AD industry is for managing organic waste disposal, but it also highlighted its limitations. Rapid changes in feedstocks during the crisis caused problems in AD plants, which resulted in high volumes of organic waste being sent to landfill or for incineration.

Carbogenics' flagship product CreChar absorbs harmful chemicals and enhances the adaptive capability of the microorganisms that reside in biogas reactors, thereby stabilising the AD process and increasing biogas production by 15%. We produce CreChar sustainably from difficult-to-recycle paper-based waste such as food-contaminated cardboard boxes or waste paper cups. Our innovative product will enable the AD industry to deal with abrupt feedstock regime changes much better. CreChar will make the AD sector more resilient and allow it to effectively respond to waste management emergencies like the COVID-19 pandemic, while also generating additional revenue of £200k/annum (for an average 1MGW plant). After its use in AD, our product can be safely deposited in soils, realising significant carbon savings.

Our Innovate UK project will initially focus on lab-based customisation of our CreChar product, followed by demonstration of its capability with an industrial partner in a full-scale trial. The project will accelerate CreChar's commercialisation, bringing our innovation to the market as early as 2021\ . Our circular economy business will contribute to the decarbonisation of the economy, thereby helping to reach the UK's net zero CO2 emissions and zero waste targets by 2050\ .

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRANSFORMING SYSTEMS LIMITED	SHREWD Elective	£99,920	£99,920

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

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## Project description - provided by applicants

**\*\*The Problem: \_Planned care is under unprecedented pressure following COVID-19\_\*\***

Nationally, it has been recognised that safe and timely performance in planned care will be an increasing challenge year on year, primarily as a result of growing demand, an older population, and as patients present with more complex conditions. At the same time, COVID-19 has brought system-wide pressures affecting the ability of the NHS to cope. Capacity is currently the most pressing issue, with no automated way of capturing available capacity data, in real-time, across the whole health system. This includes the independent sector data, which impacts the delivery of two key national requirements; to roll out capacity alerts and to offer choice at 26 weeks.

Elective care needs to be considered as a whole, in particular, having visibility and easy-to-interpret information in real-time for ALL providers within a system.

The lack of visibility of current capacity in multiple-providers means that resources are not being used efficiently. This can lead to unnecessary additional costs and more importantly, longer waiting times for patients.

What's missing is a central, single version of the truth that identifies growing pressure for planned care by speciality and sub-speciality, providing a definitive view of regions using heat-maps, to help load balance across the whole economy, to resolve planned care bottlenecks, delays and risks to patient safety -- saving precious time.

**\*\*The Solution: \_SHREWD-ELECTIVE\_\*\***

We believe there is a core data-set which can be used to inform decision making at an economy or regional level. This provides system planners with a picture of where there is a high level of demand and where there is capacity available. SHREWD-Elective displays complex data, taking account of different local operating practice and data systems.

This data can be used to reveal where the blockages are and where there is capacity in the planned care pathway. It will also demonstrate where additional resource could be invested to meet long term demand. Much of the data is embedded in local systems and practice but is not available in one place to tell the 'whole story?' in a format that is easy to understand and visualise. SHREWD-Elective will take complex digitised data from multiple systems, including independent sector and provide simple real-time visibility of demand and capacity, delivering prescriptive intelligence to empower decision-makers with the key information needed to co-ordinate and take action.

**\*\*What's different?\*\*\***

Transforming Systems? SHREWD-Platform is already recognised for its award-winning innovation and evidence of benefits delivery. SHREWD-Elective will become the day-to-day tool to manage and prioritise patients into and throughout their planned care journey.

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

Whilst every SHREWD-Elective deployment will be different in scale and scope depending on the problems being addressed, the development process will always follow a multi-phased approach to ensure maximum impact, underpinned by training and development support throughout. Each deployment will start with getting to know and understand each individual system and provider that sits within it to understand what data requirements are required to support them and their priorities.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ALP TECHNOLOGIES LTD	Circular Economy Based Uninterruptible Power Supply Battery System for Greener and Sustainable Remote Working	£100,000	£100,000

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

The internet's energy and carbon footprints are estimated to exceed those of air travel with around 1.7 billion tonnes of greenhouse gas emissions per year produced in the manufacture and running of digital technologies (climatecare.org and BBC 2020). Computers and network hardware such as data centres must be powered and cooled drawing electricity from non-renewable fuel sources.

During the height of COVID19 lockdown, UK's internet usage surges to record levels. Time spent online due to working from home is up by 67% compared with pre-lockdown usage (Opinium April 2020 survey). Remote online work has significantly increased the energy and associated carbon footprint that power the internet and the equipment that support it such as the data centres and server networks at companies and offices that enable remote working.

A promising solution to address this problem is to transform an idle backup energy storage device into an asset with an investment return and carbon savings potential.

UPS - Uninterruptible Power Supply - systems are commonly used in commercial buildings and industries to protect hardware such as computers, data centers, telecommunication equipment or other electrical equipment in case there are any unexpected power disruptions that could cause injuries, fatalities, serious business disruption or data loss. UPS can be used as energy storage systems additionally to their primary use in order to generate additional benefits to their users.

Alp has developed a utility scale smart battery system called BRIC which reduces total system cost by over 30% by using smarter electronics and AI. With environmental sustainability and circular economy principles in mind, BRIC is designed and tested to utilize new or second-life cells and substantially increase useful life.

Our game changing innovations accomplish this by an electronic design, AI and software that proactively monitor and manage the battery at the individual cell level to anticipate issues before they can escalate. Combined, these solutions will not only optimise performance and prolongs useful life but improve safety while simplifying maintenance, servicing or replacement. These unique features give the BRIC the ability to better handle older and second-life cells.

This project will involve research and development to improve the server level design (Mega-BRIC) and demonstrate that the tech and logic design can meet the requirements of a UPS system with regards to safety, efficiency and availability of the system.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 SOUND AGENCY LIMITED	Moodsonic: world-class software to generate soundscapes that enhance wellbeing, productivity and enjoyment in workplaces	£94,988	£94,988

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

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

Project description - provided by applicants

Moodsonic is a range of innovative biophilic soundscapes, scientifically designed to enhance wellbeing and productivity. These sounds are generated in real-time by computer so they do not irritate by repetition; they can help reduce distraction by masking unwanted speech, and they deliver all the proven benefits of beautiful nature sound for health and wellbeing. They can help people returning to work in the post-COVID world by reducing anxiety.

This project is to remove the bespoke hardware element that has been needed to date, rewriting the software to run on industry-standard servers, which will widen the market and speed up growth dramatically.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SMDR LIMITED	Application of SMDR for fast scale-up of pharmaceuticals	£68,500	£68,500

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 Spinning Mesh Disc Reactor (SMDR) is an innovative catalytic reactor with a potential for an improved manufacturing of pharmaceuticals. The SMDR consists of a rotating disc with a catalyst cloth resting on top of the disc. The liquid feed impinged at the centre of the disc forms a thin film with a high shear due to the centrifugal force associated with the spinning disc. This results in fast mixing within the thin liquid film and better contact with the catalyst, resulting in faster product formation. Current manufacturing uses batch technology which is slow and inefficient relative to the SMDR, as it involves several time consuming and energy intensive downstream processing steps, especially for manufacturing high purity products. The SMDR is a modular, flexible and scalable solution for a range of reactions employed in the pharmaceutical and fine chemical industries. Proof of concept examples on a lab scale have shown that productivity and reaction yield was 100% higher in the SMDR with a 5-fold reduction to the reaction time compared to conventional batch reactors.

The active pharmaceutical ingredient (API) vertical within the pharmaceutical sector is the immediate target market for the SMDR, enabling in-house production of pharmaceutical intermediates required for life saving drugs. In this project, we are carrying out the development and optimisation of the SMDR for key APIs. At the end of this project, a market ready SMDR version will be available for pharmaceutical companies to either lease/buy the reactor units, reducing the risk of high capital investment and market readiness of high value APIs. The current pandemic situation has heightened the importance of a reliable supply chain of pharmaceuticals and a need for flexible operation to meet the national demand. The SMDR has potential to enable a significant development in the production of pharmaceutical intermediates through minimum capital and operating cost and improve the global market for UK's pharmaceutical sector. Additionally, the SMDR has potential to enable clean growth in pharmaceutical industries through operating in a resource efficient way (low production cost and reduced chemical waste), aligning with one of the UK's industrial strategies.

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

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



## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ANDREWS ADVISORY LIMITED	EMSX - Student Placement Platform	£99,919	£99,919

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

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

Project description - provided by applicants

EMSX is a platform to enable digital processing of student placements and validate placement quality. It is a new EdTech solution to help solve challenges identified during 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPTIMUM HEALTH LTD	Kami Internal Weather Report	£99,800	£99,800

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

KamiCoach is developing a trusted intelligent voice-enabled companion providing individualised parenting plans complete with and a daily internal weather report, inbuilt activity reminders, and 24/7 access to expert guidance through pre- conception, pregnancy, birth, and early parenting. Teleconsultation from our vetted specialists affords parents the coaching and support they need to follow social distancing guidelines as they develop effective strategies and schedules that enable them to: work in a happy and productive way throughout their pregnancy; enhance self-efficacy and wellbeing throughout early parenting; and balance becoming their child's best first teacher with home-working and as they return to work post Covid19\.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ANIMAL VEGETABLE MINERAL LIMITED	Augmented virtual reality for the art market	£58,406	£58,406

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

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

## Project description - provided by applicants

AVM are producing a set of world-class virtual production tools to support the UK's leading global position in the market for fine art, antiques and cultural heritage.

These tools will enable galleries, auction houses and museums to produce and publish video content for sales and exhibition purposes at a fraction of the cost of the current state of the art and in a fraction of the time.

Development has progressed and target market feedback has indicated a strong need for further development to meet user requirements. User wish to have people within their 3D environments and current 3DVR tech is not good enough to meet user quality demands.

The development will deliver ground breaking augmented virtual reality features that will enable customers to create photo-realistic video content featuring people as well as 3D art works in photo-realistic environments without ever having to leave their desks.

The tools will deliver both short -term economic benefits for the Covid 19 impacted art and cultural heritage market, as well as significant long-term economic, environmental and educational benefits for UK plc. AVM estimate savings in time and the cost of production of around 75% compared with the current state of the art in

production processes.

Environmental benefits could be even more significant with potential savings coming from both increases in efficiency and customer behavior, as online only viewings and sales become more and more business as usual.

The project is designed as a short development at relatively low cost in terms of potential benefits, leveraging existing AVM technology, market position and team strengths.

Sustainability issues are addressed and some are measurable within the study, in particular those related to improved productivity.

Other benefits in this area will take longer to materialise, such as reduced travel and freight costs (low-carbon

benefits). AVM will deploy a user-centered design and project management approach to ensure outputs deliver maximum benefits to target users.

The grant will enable AVM to establish a position as a world leader in the field of video production and marketing tools for the art market. This service will in turn support and enhance the UK existing status as a global leader in the market for fine art and exhibitions by ensuring that the UK's leading galleries and auction houses have

first mover access to the technology that will enable them to manage their costs and carbon footprints at a time of great change and economic disruption.

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

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Opportunities exist to extend the use of the outputs into adjacent sectors, such as museums and exhibitions, with largely social benefits since the sector is not well resourced financially. Access to such tools will promote culture/heritage and education via low cost in-house usage but will not, in itself, create a sustainable free standing

business model within the sector.

As an extension to primary target it is a significant, and global, opportunity which will be evaluated, extending prior AVM work in this area.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RSSCAN LAB. LTD.	Introducing circular economy system in the UK insoles market	£94,038	£94,038

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 all about introducing a sustainable circular economy system in the UK insoles market. Today, the vast majority of insoles will go to landfill. Our project will create a new business model with a carbon neutral impact.

We plan to build a simple selling system where people will receive a discount off their next pair every time they return their old insoles. We will also create a subscription annual plan where they will automatically receive new insoles when they return their used insoles.

We will then take these old insoles, or any other insoles from other competitor companies, and make better/another use of them. We currently have a system in place to recycle off cuts from our post-manufacturing waste that goes back into shoe production. Also our returned insoles get cleaned and repurposed and donated to the homeless. However, in this project we want to take it to another level and increase dramatically the amount of old insoles which will be diverted from UK's landfills.

We will provide a simple method to return the old insoles together with reusable fully labeled and recyclable packaging to make the return process as easy as possible. Then we will look at reusing, re-purposing or recycling the products depending on their condition. Re-using could include cleaning and sanitizing and reselling to alternate channels and markets or increasing our donations to charities like our partner charity Forgotten Feet providing shoes for the homeless. For re-purposing and recycling we have a plan to increase the recycled material into new shoes and also the project will explore recycling into a wide range of industrial and domestic applications like school playground mats, insulation for homes and fillers for shoes. We will give the old insoles new lease of life and create sustainable circular economy in the orthotic 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 BICYCLE ACADEMY LIMITED	A highly adaptable Manufacturing System for new and existing bicycle, e-bike, cargo bike, and specialist cycle producers.	£99,942	£99,942

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Bicycle Academy (TBA) are a dedicated team of designers, engineers and cycling experts committed to facilitating the creation of better, longer-life, and more accessible bikes in the UK. TBA proposes to create focused systems to support the UK cycle manufacturing industry. TBA will develop machinery and processes to help bring British engineering to the fore of the global cycling industry.

TBA's goal is to remove the barriers to entry into the cycle industry for engineers, entrepreneurs and investors, to unlock the potential of existing UK cycle companies, and to increase the resilience of the manufacturing supply chain.

In line with the other zero-emission vehicle solutions, bikes and electric assist cycles (pedelec, often referred to as e-bikes) are a critical part of the UK's future transport plans. The adoption of e-bike vehicles will deliver economic growth and environmental improvements on a local and national scale.

COVID-19 has resulted in significantly increased bicycle and e-bike sales. Over 2,500,000 bicycles (pedal/pedelec combined) were sold in the UK in 2019 (Bicycle Association, 2020) with sales rising by over 63% during lockdown (forbes.com, 2020) and e-bike sales up 50%.

This increase in sales has caused serious supply chain challenges for bicycle retailers experiencing an unprecedented shortage of bicycles and e-bikes, whilst producers are struggling with longer manufacturing lead times, and protracted development cycles due to the reliance upon a non-domestic mass production business model. Currently only 1.5% of bicycles sold in the UK are produced here (CTC, 2015). This presents a significant opportunity for the UK manufacturing sector to dramatically increase its share of this important and growing market.

### Our Project

TBA aims to innovate a highly adaptable manufacturing system for new and existing UK bicycle/e-bike/cargo bike/mobility bike producers. The system will be composed of a suite of highly adaptable bicycle manufacturing machines, tools and fixtures, a focussed training program, agile operational processes, and the provision of key design and validation consultancy services. Compared to traditional manufacturing lines the adaptable manufacturing systems will offer a solution that requires fewer machines, less space and significantly reduced downtime for design setup changes.

By providing an agile domestic solution for bicycle design; development; and early stage manufacturing the project aims to support SME's striving to achieve a faster route to market and greater responsiveness to the changing needs of the market.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INSURTECHNIX LIMITED	Improving the cyber security of companies that allow distributed devices access to corporate networks to facilitate remote working resulting from the longer term COVID-19 response.	£84,516	£84,516

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

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

## Project description - provided by applicants

According to Gallagher, in 2019\_: "1.4m UK SMES suffered a cyber-attack/significant security incident. This cost the economy £8.8bn with the average attack costing £6,500\ 17% spent \>£10k to combat an incident with 10% paying out \>£20k. 23% of SMEs couldn't survive for \> a month if unable to trade following an incident ... 57,000 SMEs could be at risk of collapse."\_

COVID-19 has dramatically increased these risks. Cyber-criminals are adapting their tactics and targeting endpoint vulnerabilities exposed by the surge in home working. In Q2, UK businesses reported a 92% increase in cyber-attacks (VMWare). ZNET identifies a 72% increase in file-encrypted malware in the last three months and notes that ransomware attacks are now focused on stealing data as well as encrypting it. As a recent example, on 17 July, the NCSC exposed Russian attacks on Covid-19 vaccine developers.

These risks are unlikely to reduce in a post-COVID environment. A recent Gartner poll shows that 48% of employees will likely work remotely at least part of the time after COVID-19 versus 30% before the pandemic.

SMEs are particularly vulnerable to remote working attacks as they typically lack the resources required to protect against cybercrime. Given the increased number of attacks, over 100,000 UK SMEs could now be at risk of collapse.

Per Aon "\_Over the past few years, bring your own device ("BYOD") programs have increased in popularity as organizations aim to increase employee mobility.\_" In 2018, 45% of UK businesses allowed employees to use their own devices."\_ A July 2020 survey by CyberArk shows that 77% of remote employees are now using unmanaged, insecure BYOD to access corporate systems. Per Aon "\_Ideally, entirely separate devices should exist for corporate and personal data. However,\_ \_most organizations that did not follow a policy of issuing employees separate corporate devices prior to the coronavirus outbreak are highly unlikely to incur the costs of doing so now.\_ \_...\*\*As a result, there is an increased risk of data leakage particularly if personal devices are shared between family members or insecure network connections are being used\*\*.\_"

SMEs, while among the most vulnerable organisations, lack the specialists to assist them defend against the threat. Cyber risk management needs to be democratised to allow non-specialists to manage the basics of cyber defence.

The Innovation Focus is to extend and repurpose InsurTechnix's existing software to meet the needs that Aon and many others describe by:

\*\*1\ Providing a means by which SMEs can ensure that laptops and phones, including BYOD, being used to access their networks meet the minimum security thresholds to defend against/avoid the substantial majority of threats;\*\* and,

\*\*2\ Characterising, quantifying and reporting the data held on distributed devices, including BYOD, so that the risk of a data breach can be minimised by reducing the nature and volume of data held in higher-risk environments.\*\*

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DUO ME LIMITED	Flexible Working for Distributed Teams	£97,862	£97,862

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

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

Project description - provided by applicants

Flexible Working for Distributed Teams focuses on how to support companies, managers, and employees to be successful and productive when more people work remotely more often.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FIRST GRAPHENE (UK) LIMITED	An alternative route to green hydrogen and battery grade materials	£79,845	£79,845

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

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



## Project description - provided by applicants

Graphene continues to be an important material for the new technology sector in the UK, with applications emerging in the construction, mining, transport, textile and processing industries. Graphene materials bring improvements in sustainability through light-weighted composites and rubbers, enhanced durability in plastics, reduced cement use in construction, low-toxicity fire retardants and high performing batteries and supercapacitors.

Graphene materials must be manufactured with specific size, shape and chemistry to create value in these applications -- requiring carefully controlled manufacturing processes. Most graphene products are manufactured from natural graphite which has been identified as a scarce commodity by the European Commission. For continuing leadership in the graphene industry the UK must have robust, low cost manufacturing routes from a range of feedstocks to deliver high performing graphene products.

Two small UK companies, First Graphene UK Ltd. and Kainos Innovation Ltd. are collaborating to develop a totally new process to manufacture graphene products from low cost petroleum-based feedstocks. The process manufactures high performing graphene products with controlled size, shape and chemistry. An additional benefit of the process is that green hydrogen gas is the only by-product. The by product is accurately described as "green hydrogen" as no carbon dioxide or carbon monoxide products are generated. The project team estimates that from every tonne of petroleum feedstock, 940kg of graphene/graphitic carbon and 60 kg of green hydrogen gas is produced.

The manufacturing process is proven at the bench-top scale and the companies are now seeking government support to validate the process chemistry and optimise the choice of petroleum feedstock, confirm the capture of hydrogen gas and prove the product performance in enhanced lithium ion battery cathodes.

The project will provide First Graphene (UK) Ltd, a UK-based company with access to a multi-billion pound energy storage 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LAZY DOG SOFTWARE LTD	BrokerSense Marketplace – Better connecting underserved mortgage borrowers with the specialist lenders who can serve them.	£50,702	£50,702

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 a clear existence of a bias in the mortgage market that is affecting people whose mortgage application is considered non-standard, be it either related to their income situation (self-employed, bad credit history, etc.) or to the property for which they are requesting a mortgage loan (Large Concrete Panel construction, knotweed on property grounds, etc.).

Indeed, while a number of specialist lenders exist to serve this market, their offer often does not meet demand due to the existence of multiple lending criteria that render such applications very complex.

In the context of COVID-19, this issue will affect a growing proportion of applicants, as the labour markets are facing a strain with 7.5 million employees on furlough and a clear increase in zero-hour contracts, all the while lenders are becoming more risk-averse and the house mortgage market is seeing a contraction.

Mortgage brokers are critical intermediaries in the industry. They support clients going through the process of finding a mortgage offer that suits their situation. However, mortgage brokers charge a proportion of the loan at completion, which reduces their incentive to support less time-worthy complex cases. Specialist brokers would accept difficult cases but typically charge fees that are 5 times higher.

In this project, Lazy Dog Softwares will build a first-of-class service able to suggest the most relevant lender for a given client, significantly reducing the time spent by brokers searching for a matching loan offer. Lazy Dog Softwares is thus planning to transform its existing solution, BrokerSense, to do so. BrokerSense is a SaaS platform allowing UK-based brokers to search mortgage lenders based on their affordability. In this project, BrokerSense will be transformed into a two-sided marketplace linking brokers and lenders on one tool through data on their clients. Using this data, we will develop a solution able to significantly reduce time spent by brokers searching for mortgage offers specially in complex cases.

The results of our project will improve the capacity of the market to serve the needs of clients in complex situations while reducing the financial burden on them. It will therefore have a strong impact on the inclusivity and equity of the mortgage market that is critical for UK taxpayers in a context of economic contraction.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FF MEANDER LIMITED	Novel multiple algorithm-driven travel booking platform for flight-free travel	£99,748	£99,748

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Byway, the journey is the star of the show. We help travellers explore the world by travelling through it - by train, boat, bus, etc. - rather than flying over it. We draw tourists away from airport hubs suffering over-tourism to the wonderful places in between, boosting local economies. We see a post-Covid world in which flight-free holidays are normal, and a vibrant travel ecosystem flourishes away from the beaten path.

Current ground-travel route planners (think Google Maps and Rome2Rio) optimise for speed or cost. With Byway, we're optimising for experience. Our technology will dynamically package multi-modal ground transportation (trains, boats, buses, bikes, ride-hailing, etc.) with personalised experiences and accommodation in a way that's never been done before. This will allow us to create custom journey plans and package holidays on a per-customer basis.

For example, you can get from Glasgow in Scotland to the Hebridean Isle of Mull in 4 hours and 22 minutes, with a train, ferry and a bit of walking - and that's what current journey planners will tell you to do. We won't. If you're a lover of the outdoors and have a bit of a thing for seafood (which we know from the data you gave us at onboarding), we'll tell you to take nine hours over the journey instead. That's because we know you'll love alighting from your train at Loch Lomond for a walk and a two-hour kayak before lunch, leaving your bags with one of our partners. When you arrive at the port of Oban a little later, instead of waiting around for 20 minutes to catch the next ferry, we're going to suggest you drop your bags and settle down for dinner at one of the best seafood restaurants in town before catching an evening ferry out to Mull. On Mull we'll have booked you somewhere to stay that suits your preferences, and will connect you in real time with the appropriate buses/taxis/bikes/luggage transfer etc. to take you to your door.

We exist to make flight-free holidays seamless and personal from start to end. We want to help our customers experience the joy of journeying by train and boat, opening their eyes to a new way of holidaying, in which they can experience the lesser-known parts of the world instead of flying over them. We want Byway to blaze a trail into a new travel ecosystem growing up around sustainable, authentic and conscious travel. We have become a pre-registered BCorp, which means we're committed to building a business that's a force for good.

Byway holidays are about journeying through delightful under-explored parts of the world, away from crowds. We want to establish a new paradigm for holiday travel, where the journey is part of the holiday, instead of a means to an end.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LARGE DIAMETER DRILLING LIMITED	Next generation offshore wind turbine monopile foundation installation drill.	£99,478	£99,478

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

LDD will develop the next generation of wind turbine installation drilling equipment supporting a reduction in the Levelized Cost Of Energy (LCOE) for fixed offshore wind.

Offshore Wind Developers are planning for bigger and more powerful wind turbine generators, requiring much larger steel monopile foundations to support increased design loads. LDD in consultation with Offshore Wind Developers has identified that the world's current drilling capacity, including LDD's own designed and built drilling equipment, is insufficient to drill these new larger foundations, efficiently and economically.

LDD will use its in-house design capability, coupled with market leading drilling experience and adoption of new, applicable and complementary technologies, to develop a drilling system to facilitate the installation of the next generation of offshore Wind farm.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ZIPCUBE LTD	Zipcube for Work: The ideal corporate management solution for COVID-safe offsite workspaces and meeting spaces	£99,985	£99,985

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

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## Project description - provided by applicants

Zipcube for Work (ZFW) is one platform, with one invoice, and one seamless service.

The Zipcube for Work project proposes an extension of Zipcube's online platform by streamlining the booking process for business clients. This new platform will enable easier corporate booking management through greater oversight and streamlined account services.

British offices, the commercial workforce, and the meeting industry have been severely disrupted by COVID-19. Approximately 73% of UK business leaders predict they will downsize their offices after the coronavirus, an anticipated 30% of the workforce will remain remote, and the Meetings and Events Sector is reeling from continued restrictions related to the pandemic. There is both an excess of unused space and a growing need for on-demand workspace.

Zipcube's current online service helps users to find and book agile work and meeting spaces on-demand across the UK. ZFW leverages the power of this service and streamlines the process to better support the needs of corporate clients. Not only does ZFW allow businesses to rent out unused office space, but it also facilitates companies to provide access to meeting space for their dispersed remote working teams. The project addresses current limitations of Zipcube's platform and aids in automating key account services that are currently being done manually. Additionally, the work includes a sustainability survey that will provide valuable insights into the changing needs of business clients in relation to their workforce and current office foothold.

ZFW will offer an admin dashboard to make it easier for companies to give staff access, manage booking approvals, and manage usage. The dashboard offers admins better awareness, accurate reporting on employees' bookings and guarantees that those spaces booked are following the COVID-safe government standard above and beyond. Currently, many business clients use Zipcube without being aware that their colleagues may also be making bookings. ZFW allows Zipcube to work more closely with business clients and streamline their accounts so that they can promote the service as a benefit to their teams.

With business meeting and event enquiries decreasing by [78%][0] in the UK in Q2 2020, ZFW will help the sector diversify their client base. By renting out more flex office and meetings spaces, companies in the Meetings and Events sector will be able recoup some of the losses related to COVID-related limitations on the size of gatherings.

Since the pandemic has changed the nature of how workers utilise existing office space, greater access to agile workspaces both alleviates the stressors and feelings of isolation that working from home can cause, and also provide a valuable revenue stream for the ailing meetings and events sector.

[0]: [https://www.mia-uk.org/write/MediaUploads/Aug20\\_DCMS\\_Industry\\_Survey\\_Findings.pdf](https://www.mia-uk.org/write/MediaUploads/Aug20_DCMS_Industry_Survey_Findings.pdf)

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Club Qu Limited	Club Qu	£112,572	£99,063

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

Club Qu is a platform that provides participants from the electronic music industry new ways to monetise their content through live-streaming from virtual environments.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
VEON SCIENTIFIC LTD	TRL9 - Compact Lab System for COVID-19 Sample Preparation	£99,230	£49,231

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

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

## Project description - provided by applicants

Veon Scientific are a manufacturer of custom liquid handling and automated robotics for laboratory sample handling. They are seeking to break down the boundaries between manual pipetting and automated liquid handling by developing an innovative low cost liquid handling robot combined with an intuitive touch screen application suited for quick set-up of simple tasks or complex assays.

It is well established that robotic automation or liquid handling systems can be used to increase the reliability, accuracy, throughput and speed of sample preparation however Veon Scientific are combining these key advantages with a scaled down system. Furthermore, this development creates a technology with such affordability and simplicity that it will be accessible to all laboratory scientists bridging the gap in the market between manual pipetting and automated techniques.

Amidst the COVID-19 pandemic, significant demand has been placed on laboratories to perform a high quantity of clinical tests to determine if patients have contracted the virus. PCR is the globally established molecular biology technique to perform this test. Clinical samples (swabs, serum, etc) need to go through preparative steps prior to performing the qPCR process and ultimately achieving a clinical result for the patient.

The inability of existing large format automated systems to really address the needs of the lab is evident in the fact that, amidst the COVID -19 crisis, many front-line lab technicians are using manual pipetting to process samples. Veon Scientific have identified this unique need for a liquid handling system that is inexpensive, extremely simple and fast to operate, and sufficiently compact to fit at a lab technicians' individual workspace.

A further significant benefit of this technology is the time capacity that is created by removing the need for laboratory scientists to perform labour intensive tasks. This will enable scientists in industry to focus their time on other aspects of science, including developing a better understanding of the COVID-19 virus or maximising laboratory efficiencies and reducing error.

Veon are currently underway with a development that will take the project through to TRL7\8. The intended use for funds obtained from the Sustainability grant will allow further development to TRL9\10.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PHEROSYN LTD	Covid-19 Recovery: Optimising routes for scaled-up production of high value pear midge pheromones	£99,771	£99,771

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

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## Project description - provided by applicants

The COVID-19 global pandemic has affected UK R&D in the manufacture of speciality chemicals using sustainable green chemistry routes (produced adhering to the 12 Principles of Green Chemistry), including pheromones that are used to manage insect pests affecting UK food production systems. The pandemic has delayed, by several months, PheroSyn's proposed R&D activity on developing routes for commercial scale production of midge pheromones where the company was poised to begin developing sustainable and green chemistry routes for midge pheromone production. It is now imperative for the company to drive forward this new innovation of supplying the high-value, not currently available midge pheromones for pest management. Not only will this provide a positive climate impact through reduced pesticide production that use fossil-fuel based feedstocks, but it will also provide sustainable and climate-friendly management of pests through IPM based strategies.

Midges are small (ca. 3mm long), fragile flying insects that affect a variety of crops and are a significant global pest of arable and horticultural food production. Midge management is a potentially lucrative and growing market in the pest management industry globally, including in the UK, the EU region, North America and South America, where midge problems are well established. Management of midges is problematic; their life-cycles mean that grains and fruits can be potentially exposed to pesticides which subsequently enter the human and animal food chain. Furthermore, there is a global trend to move away from reliance on chemical pesticides in food production in favour of integrated pest management (IPM) strategies. The need for IPM strategies is also driven by loss in efficacy of pesticides, pesticide availability due to legislative regulation, and environmental issues associated with pesticide use. Pheromones form a critical component of IPM strategies, but, compared to other crop pests, there are virtually no midge sex pheromones currently available on the market.

PheroSyn already has market-ready midge pheromones in its current portfolio but there is an opportunity to expand this portfolio by developing further new not-currently available midge pheromones into effective commercial products. PheroSyn aims at commercialising insect sex pheromones for sale into the established agribusiness sector, and to capitalise on expertise in novel methods for monitoring and control of a wide range of crop pests important to crop health and production.

The objective of this 6-month experimental development project is for PheroSyn to optimise green chemistry routes for the production of two high-value midge pheromones, to be used in midge-specific traps that are capable of detecting early stage infestations of midges in crops. Optimisation of the routes will enable PheroSyn to accelerate business growth, supplying effective, sensitive, long-lasting, safe, affordable and discrete tools to farmers and growers on a global scale.

PheroSyn's optimisation of midge pheromone production will be underpinned by the company founders' technical know-how. The PheroSyn team has a combined 40+ years of experience in pest pheromone R&D and pheromone chemistry.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LEARNISA LTD	Learnisa	£99,341	£99,341

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

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## Project description - provided by applicants

Prior to COVID-19, automation was driving workforce disruption. Since the pandemic, this disruption has exacerbated. Many people will need to upskill and retrain in order to keep or land a job. The affordability/feasibility/flexibility of online courses make them an ideal solution to upskill the workforce. However, the market for online courses has become saturated with >30k courses provided by >1000 different institutions across >40 platforms. Thus, people face the most difficult task before they have even started learning...and that is finding the RIGHT course to enrol on. Despite the attempts of basic course search aggregators to resolve this problem, much of the workforce are still left unsure about what skills they need to acquire and more importantly how to attain them.

Learnisa is developing an AI-powered platform that makes personalised recommendations of online courses. By intelligently profiling a learner, Learnisa conducts a smart matching process to recommend the most suitable courses to learners that are optimised for their success. With Learnisa, learners can avoid lengthy and ambiguous searches for courses...and invest time and money on learning the RIGHT content. Whether you're taking an online course to gain skills for your career...or even a hobby, Learnisa can help you find your ideal course(s).

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BUILD TEST SOLUTIONS LIMITED	Building insights: metrics informing performance, wellbeing and risks	£99,339	£99,339

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

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

## Project description - provided by applicants

Build Test Solutions, in partnership with Loughborough University and SOAP Retrofit, are working to develop, validate and implement a highly scalable mould risk indicator for homes. Designed as a web hosted algorithm to sit alongside our existing SmartHTC thermal performance measurement solution, the proposition is one that may be called by APIs and readily integrated into a wide range of existing in-home devices, products and/or assessment services.

Exposure to mould increases the risk of respiratory illnesses, allergies and asthma, and can also affect the immune system. Respiratory illnesses are one of the largest causes of death in the UK, with the UK Office for National Statistics listing them as a cause of death for more than 35,000 people per year between 2016-18, with the poor housing specifically said to cost the NHS £865m per annum. Although never directly measured and assessed at a national scale, it is estimated that as many as 50% of homes suffer from black mould growth issues, and/or condensation.

Our innovative system will provide invaluable insight on the risk of mould and condensation in owner-occupied, tenanted and care homes alike. Coupled with our innovative SmartHTC system which measures the thermal performance of the building fabric, accurate recommendations for retrofit and improvement can also be made. This includes; upgrades or provision of ventilation systems, installation of insulation, and/or changes in user behaviour.

We spend 90% of our time in buildings and we deserve them to be free from mould and other potential health issues at all times. Our solution will facilitate continuous identification of potential condensation and mould issues (often before they occur), and provide targeted mitigation recommendations. We therefore enable long-term protection of building occupants and the buildings themselves, critical to ensure the UK prospers in a post-COVID world.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MODECE ARCHITECTS LTD	Design + Prototyping of Hemp Stalk products for the Construction Industry	£57,561	£57,561

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

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

## Project description - provided by applicants

Modece's aim is to research and develop the use of hemp in construction and architecture. The company pioneered the use of Hemp-Lime in the UK in 1985 and has since developed the technique in countless successfully delivered projects. Modece is now developing innovative structural elements made from hemp stalk to replace timber in traditional construction.

Covid-19 had a direct impact on the supply of industry leading construction materials which has caused the reduced output of housing in the UK in early 2020. [2] The timber industry was affected by Covid-19 with imports dropping significantly, with drops in supply volumes of between 30-70% across the timber construction product range. [6]

The proposal is to develop hemp stalk based construction elements to be used as a sustainable alternative to mainstream and less sustainable concrete, steel and timber construction methods and thus reducing the UK construction industry's dependence on global supply chains that have proved to be vulnerable to interruption from market influences such as the Covid-19 pandemic. The idea is that the construction elements that result from this project will be produced, processed and installed locally to where the demand for construction is, in a highly sustainable and global market resilient manner.

Hemp could provide an annually grown building crop that is both renewable and acts as a carbon sink when locked into the building fabric. It has the potential to become an ultra-sustainable component in construction.

The proposed project will focus on 3 work packages: design theory of hemp's use in construction (P1); Experimentation and testing of the materials and techniques (P2); and documentation and Patent filing (P3).

**\*\*The project is a fundamental step in Modece's journey to create the worlds first hemp stalk structured building.\*\***

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
URBAN INTEGRATED LTD	eMaaS Local	£96,801	£96,801

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 (electric Mobility as a Service) eMaaS Local App project supports the Road to Zero strategy of 50% of all new cars being EVs by 2030 and 100% by 2040, by enabling simplified application based access to low carbon forms of transport including shared electric vehicles for customer trials and regular usage, while providing easy access to EV charging infrastructure.

Over 43% of households in the UK lack access to off-street charging or home charging. The market opportunity identified in our Park and Charge Feasibility Study (project number 133827) model is that existing car parks in close proximity to homes can be used at night to provide Electric Vehicle Service Equipment (EVSE), i.e. electric car chargers, to these potential EV buyers. Nearly 20% of respondents to the University of Oxford survey for the Park and Charge Pilot project (project number 34277), were identified as using a shared EV at least once a month, indicating a clear demand for shared mobility. A challenge for these users is that there is significant market fragmentation regarding electric and shared mobility services, with currently no integrated services which enable booking and using of a shared EV, e-bike and EV charge point from within a single service. This opportunity is exploited in this project using the eMaaS Local App model; development of a unified eMaaS Local App for customers, to manage, book, and use charge point and shared mobility services from a selection of providers all in one place. This will include charge points and shared mobility options, such as shared electric cars, e-bikes, and e-cargo bikes.

We will utilise open data standards, including Open Charge Point Interface (OCPI) and Transport Operator MaaS Provider (TOMP) APIs to integrate with mobility and charge point operators, enabling the application to be operator agnostic paving the way to future integration with additional mobility and charge point operators. The application pilot will be the first step towards developing a fully-fledged eMaaS application, which can be white labelled and sold B2B to eMaaS providers and B2Public Services for eMaaS platform services.

The limited pilot will take place at a Park and Charge Pilot location in Oxfordshire, or a suitable alternative. During the pilot we will test the application integration with shared mobility services, including the integration testing for one electric car, one e-bike, as well as one bookable EV charge point. Our project will focus on local / last mile / business use cases to enable community growth around local eMaaS hubs.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ALLOT LIMITED	PHARLYTICS	£92,409	£92,409

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

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



## Project description - provided by applicants

Competition is high in the pharma and healthcare market. Creating a new innovative drug, doesn't guarantee anyone will buy the medicine. For commercial success, a pharma company must not only provide value, but the drug maker must also be able to tell the value story to a specific audience(s) like the department of health, NHS authorities, healthcare practitioners and payers.

The introduction of a new drug goes through the approval process of NICE, the central approving authority for the department of health. However, for it to be prescribed, the pharma company needs to gain approval in each healthcare organisations who take independent decisions on price, doses, restrictions and approval time. This is particularly challenging for SMEs, who may lack the staff and resources to target all the groups and create targeted value propositions for each of them.

It was a complex and time consuming to obtain all the data required on both the drugs and trends in prescriptions across the country to target the areas where the drugs will be most applicable even before the COVID pandemic. It is even harder in the context of the 'new normal' working systems with ability to have face-to-face meetings. Less health service staff time is allocated to be available even for video conferences for such meetings, which severely limits the ability, especially for SMEs, to get their drugs on approved lists. This has created the need for more analysis and evidence based decision making on drug proposition, competition analysis, understanding the payer (local health authority) and why the pharma company should targeting a particular healthcare practitioner.

PHARLYTICS will provide the pharma companies with simplified access to the best quality data presented in the optimised format for targeting their innovations in the right areas and creating the value propositions to the needs of the market. Using PHARLYTICS will save the client 40-50% of their data gathering costs and 5 months in time, between £10-50K per year in cost, £40-60K in staff time and create the opportunity to increase sales.

PHARLYTICS insights supports the commercialisation of launched drugs and new launches, resulting in greater formulary inclusion and sales growth.

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HEIMDALL PROTECTIVE TECH LTD	Soft Shell Cycling Helmet for Head Protection	£94,850	£94,850

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

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

## Project description - provided by applicants

Heimdall Protective Tech, with its Mass Impact Technology has a unique, flexible plastic shock absorbing material. This project will apply this bespoke technology as an insert to create a protective soft shell helmet for use in cycling and other NMT.

**\*\*Head protection is a fundamental need which we are addressing.\*\***

The safety of cyclists is of paramount importance where there are more accidents and injuries compared to other forms of transport, recognising head injuries and skull fractures as the most difficult fractures to deal with.

Traumatic brain injury costs a total of £15billion nationally every year according to research published by Centre for Mental Health.

With healthcare costs for head injuries and using scarce resource, increased wearing of protective headwear will reduce strain and unnecessary cost to our NHS during testing times e.g. Covid-19 outbreak or similar pandemics.

Through prototyping, demonstrating, piloting, testing and validation, this transformational product could meet an essential safety requirement, highlighted by COVID-19, **\*\*but most importantly applicable to general societal needs which have dramatically increased as a result of the COVID-19 Pandemic\*\***

Getting this product to market and increasing protective headgear wear will reduce injuries

The new protective headgear will have a beanie style and address several different needs in these modern times:

- 1\ Traditional cycling helmets are rigid '1 hit designs' and should be replaced after a collision or if dropped with enough force to cause structural damage (ROSPA). This is a multiple impact product which can be used time and time again.
- 2\ It is flexible and foldable, ideal for the recreational and commuter cyclist market as well as the NMT.
- 3\ It is machine washable, enabling cleanliness and freshness as well as killing microbes, preventing infection spread
- 4\ The soft shell helmet is a less bulky, more pleasant, comfortable and affordable product in the marketplace whilst still maintaining and indeed enhancing high levels of protection
- 5\ ROSPA and Cycling UK believe that enforcing cycle helmet wear will discourage cycling. Some of the resistance to wearing helmets is the aesthetic and bulky nature of current helmets
- 6\ A beanie style is a more attractive option for younger cyclists, skateboarders and a conventional hat style suitable for all ages, rather than the bulky solid shells currently available

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

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7\ The cycle beanie is 100% recyclable, whereas traditional solid foam helmets are not. The plastic is a virgin product, reusable for the purpose it was manufactured. The fabrics use no solvents or adhesives and can be recycled in the same way as other fabrics.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DATA INNOVATION.AI LTD	AI-Enabled Bio-Safety Assessment Tool for Sustainable Building Design in Pandemic Conditions.	£95,740	£95,740

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

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## Project description - provided by applicants

At this time not only is there a global pandemic for the novel coronavirus COVID-19, at time of writing this application there is the 11th outbreak of Ebola being fought in Africa, Europe is recovering from a 3-year outbreak of measles and a peak in West Nile fever across Turkey and eastern Europe. World Health Organisation has said of COVID-19, "this virus may never go away". Revise Sociology reports that we spend 92% of our time indoors and 50% of our time in the workplace therefore we need to start to design our buildings with the threat of epidemics in mind.

In 2018 the value of construction new work in Great Britain continued to rise, reaching its highest level on record at over £133bn and as at 2018, the capital value of commercial property in the UK amounted to £951bn. Globally this is a £8trn per annum industry: the lack of occupation and confidence in returning to work has effects both the future investment in buildings and the current and future incomes from these properties.

The Royal Academy of Engineering stated recently, "We have to link our work to our health and these are challenges that can be achieved fast only through artificial intelligence."

The COVID-19 experience during 2020 has revealed a class of risk that, while continuously present, has been overlooked until now. Just as structures where many people congregate potentially expose their occupants to fire risk, air quality risk, water safety risk, etc., it is now clear that any large, enclosed structure may pose a bio-safety risk to its occupants under pandemic conditions.

There is currently no solution to assessing these risks and the complex interaction of epidemic modelling, facility engineering and human movement, means only AI can do this. Within a building or facility primarily focuses on the comfort of occupants although does use air quality and people density as a direct measure of success. Solutions driven by this modelling must also be attested against the RIBA sustainable outcomes for Good Health and Wellbeing. This is the perfect use case for Decision Intelligence - human decision-making with AI.

To protect these assets from financial losses, and their occupants from harm, professional disciplines have been established that:

\\*Specify design "codes" to which buildings must conform to assure safe operation,

\\*Provide sophisticated analysis tools and techniques while the structure is still in the design phase to assess risks and identify mitigating measures, and

\\*Provide capabilities to assess existing buildings against the requirements of the code.

**\*\*Data Innovation.AI\*\*** is leading the establishment of a new professional discipline serving the architectural, engineering and design sector, and dedicated to assuring that structures fulfilling the above requirements for bio-safety of major structures during pandemic conditions, and is developing methodologies with supporting software-as-a-service tools to achieve this.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IBISVISION LIMITED	Ergonomics, Human Factors & Device Agnostic Software in Remote Internet based Optometry	£61,911	£61,911

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

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

## Project description - provided by applicants

IbisVision develops software-based products and infrastructure for testing vision. Our equipment and software is normally used by an optometrist in an examination room but during lockdown we responded to the need for socially distanced testing by bringing forward a work programme to develop a remote tele-optometry system.

The underlying technology and infrastructure needs to be secure, reliable, clinically validated and with encrypted data and communications handling. Our goal is to enable the optometrist to attend the consultation remotely by engaging in real-time with the patient via the patient's own internet and devices. This approach is innovative and different from most other approaches because others are trying to remove the physical need for an optometrist through the use of computer algorithms. We believe it is important to support optometrists and optometry businesses and also take advantage of all their human skill and training by providing a conduit for them to maintain continuity of care, personal relationships and business development through a mixture of digital and real consultations but always clinician-led with full clinician accountability and a synchronous audio, video and data engagement with the patient- as close as possible to a real examination room experience for both parties.

A big challenge and one that has previously been pointed out to us is that to conduct a clinically valid eye examination for any reason one needs to have some means of quality control at the patient (remote) end, over which we have very little control.

This application is to understand the factors introducing noise and variability at the remote location looking at:

**\*\*Suitability of the patient's device and screen.\*\***

Variability across a screen (brightness, colour, contrast) may affect the validity of the result. We are developing ways to assess suitability of individual screens remotely and to either work around or compensate for the lack of uniformity.

**\*\*Ergonomics\*\***

It is important that the patient is at the most relaxed and comfortable position relative to their screen and input device. We are developing methods to ensure they are optimally positioned using the limited domestic resources they have to hand, and ensure their movement and fidgeting during the test is minimised.

**\*\*Human Factors/psychology\*\***

We are developing standard operating procedures and scripted instructions to optimise the relationship between the patient and the technology and to help build rapport and cooperation between the optometrist and the patient.

**\*\*Project output\*\***

\* A means of working around or compensating for variability in the patient's display device (screen) sufficient to ensure a high probability of a valid result.

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- \* A means of ensuring the patient is in the best possible position so they don't move during the test.
- \* Procedures and scripts to conduct the tests in the most engaging and collaborative way to optimise compliance.

To help us we will recruit a test population of those who have been introduced to virtual meetings during lockdown but are otherwise not technically minded. We know church and charity groups willing to help and we believe these individuals will be representative of our target demographic.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STEP EXCHANGE LIMITED	Innovative education finance enabler predictive algorithm and automation	£99,940	£99,940

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 create the technology infrastructure to enable provision at scale of the first regulated, outcome-based consumer finance, and in doing so widen participation for the UK's professional qualifications. The FCA have granted StepEx unique authorisations that permits the issuance and management of Future Earnings Agreements- "FEAs". This project will fund the necessary infrastructure for the successful and compliant delivery of this product into the market. The benefit of this proposition is it will provide financing for the most able students who are currently excluded -those who are not beneficiaries of "the-Bank-of-Mum-and-Dad".

The Government student loans of £10,906 available today do not cover the cost of top post-graduate degrees (e.g. London Business School MBA at £87,600) and are ineligible for technical qualifications (e.g. Makers Coding Bootcamp £9,600). 75% of people in the UK who could benefit from these qualifications (those under 30-years-old) are excluded as they are unable to obtain more than £6,000 of funding. The institutions that provide these qualifications have traditionally relied on international students to fill demand however COVID19 has deterred a significant portion of prospective foreign students.

Debt providers are unable to provide an effective solution for this market because they are legally and commercially obliged to assess applicants based on their past income and expenses, which does not consider their greatly improved salary prospects upon graduation. The consequence of this is the exclusion of many applicants, and unaffordable repayments that lead to high default rates for those few that do take loans.

StepEx will enable universities and technical providers with to offer students the ability to pay for a course with a share of their future graduate income rather than just an upfront fee for example a Master of Engineering for an upfront fee of £30,000 or 7% of future earnings for 5 years when earnings exceed £25,000\ . Akin to students giving the university "sweat equity" in their future income for a defined number of years. This will allow the up to 10m UK residents who are unemployed or whose jobs are at risk largely due to COVID19 to attain the skills required to reenter the much changed post-COVID19 workforce.

This project will provide the necessary infrastructure for launch, including an office facility, key operations staff, technology re GDPR/collections, marketing and tax/legal advice.

Upon successful completion of this project, StepEx will have created all of the necessary technology infrastructure to provide the financing solution being sought by education institutions to widen participation in the £6bn worth of top post-graduate and technical courses in the UK each year. This will assist the UK economy rebound to preCOVID19 levels by helping the 10m UK residents who are unemployed or at risk of unemployment, obtain the skillsets required by UK businesses. Those countries with the most qualified, flexible and innovative workforces will return most quickly to full employment and international competitiveness.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WORKING ENVIRONMENTS FURNITURE LTD.	Development of Morph recycled, recyclable and reconfigurable furniture products	£76,883	£76,883

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

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

## Project description - provided by applicants

Responding to the growing demand for eco friendly furniture, Morph is an ambitious and innovative modular construction system that is 100% recycled and 100% recyclable. This system will provide cost effective and flexible solutions to companies that are struggling to find adaptable solutions to Covid-19 affected office layouts. As the system can be repurposed to suit different uses it can be utilised long after the Covid-19 pandemic has been resolved but will follow new office trends as well as giving the flexibility to adapt to any future emergency or change to regulations.

Offering hire options to allow clients to try the product as well as a buy back option to give a complete circular economy will give struggling companies the adaptability they need to trade their way out of the current crisis. It will encourage a permanent flexible development policy within office environments and will contribute to the government policy for reducing environmental impact.

Not only is this a product that large manufacturers and dealers are currently admitting is needed, but don't have, its also a product that will allow companies to have socially responsible returns, contributing to the circular economy.

Morph will encourage young designers to build their own environmentally friendly products using the system and will create employment opportunities and increase exports. By allowing repurposing of assets to reduce waste it will encourage long term investment and inspire a mindful approach to work interiors. It will help support the movement against the throwaway culture.

This project will take the Morph system through the last stages of R&D for the core components and will result in finished office furniture products that have been tested in situ.

The system currently consists of four core component parts enabling a building block approach to creating numerous product designs from office furniture, screens, meeting bay areas and outdoor furniture. Later this can be expanded to private meeting pods and outdoor spaces. Fully adaptable, every product can be dismantled and repurposed or stored for later use. The components are lightweight yet strong, will be made from 100% recycled materials and will be 100% recyclable. The project offers a regenerative approach and circular business model and aims to reduce the enormous amount of commercial furniture and fit-out dilapidations which end up in UK landfill today.

Morph (to change from one thing to another) will give furniture the ability to adapt to our changing world whilst protecting our environment.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Biopack - self-sanitising food bio-packaging	£53,289	£53,289

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

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

## Project description - provided by applicants

Concerns over the safety of food packaging have been growing as studies have shown that re-useable bags can contain bacteria contamination from re-use. Bacteria such as E-Coli and Campylobacter can be present on the outside of food packaging materials, and contact with the bag will cause cross-contamination. Hence the recommendation to use fabric bags and wash regularly. The core of the problem relates to the presence of harmful bacteria on the outside of the packaged food products. Even with high food hygiene standards in the UK, the rates of Campylobacter on the outside of chicken packaging has risen from 6 to 7% in 2020\ . A US study showed that 51% of 'bags for life' contain harmful bacteria.

The project will create a technology to prevent the survival of bacteria and viruses on food packing. The material stock used to wrap the food will have a biocidal coating on the outside that will rapidly kill any form of organic contamination. Whether the contamination occurs in the factory or at the supermarket, the bacteria and viruses will be killed within minutes.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PLANT POWERED BABIES LTD	Plant-based infant formula and toddler drink product development	£98,340	£98,340

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

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## Project description - provided by applicants

Little Iris is a plant-based, allergen-free, fortified babyfood powder formula. For the past two years, we have worked with a food product developer to create recipes for four products: two for infants (0-6 and 6-12 months) and two for toddlers (12+ months, 'Wakey Wakey' and 'Night Night' drinks). These will be sold in biodegradable pouches. Our aim is to provide parents with more choice, whether they follow a plant-based lifestyle, are 'plant-curious', have children with allergies or simply want to live more sustainably. We have deliberately avoided soya, which is known to affect hormone development in infants and is less sustainable than pea protein.

There is a huge gap in the market, and very little choice for parents, when it comes to infant and toddler formulas -- an industry that is saturated with dairy products.

Veganism is hugely on the rise in the UK. Interest in 'veganism' increased seven fold in the five years between 2014 and 2019, according to Google trends. A global switch to diets that rely less on meat and more on fruit and vegetables could save up to 8 million lives by 2050, reduce greenhouse gas emissions by two thirds, and lead to healthcare-related savings and avoided climate damages of \$1.5 trillion (US).

Allergies are also on the rise, with 7% of children living with food allergies. Cows' milk allergy (CMA) is one of the most common childhood food allergies. It is estimated to affect around 7% of babies under 1\.

And even before the arrival of COVID19, only 34% of babies in the UK were receiving breast milk at the age of six months. This figure is set to rise hugely, with fewer mothers able to access breastfeeding support as a result of COVID19\.

Now we need funding to go into our next stage of R&D: working with experts to test each formula, make sure they meet nutritional requirements and adhere to food safety standards. Another challenge is to pass a new legislation for our key ingredient: hydrolyzed pea protein, which has never before been used in babyfood because since there is currently no legislation in place in the UK to use pea protein in this area.

This project is innovative as we are working to get new legislation passed for pea protein to be used in babyfood for the first time. The output, alongside our products, will be scientifically proven legislation, from which we can educate and reassure audiences about the properties of pea protein and all of the ingredients in our products, dispelling myths and opening minds using studies and testimonials from clinicians, nutritionists and midwives. This legislation will be a gamechanger for babyfood: for manufacturers it will make it more widely useable and therefore reduce its costs for brands wanting to use it. For parents, there will be an allergen-free, healthy and sustainable choice for their children.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 SUSTAINABLE SEQUIN COMPANY LIMITED	Developing biodegradable sequins	£96,055	£96,055

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 market of sequins apparel is around 12.3 billion USD in 2020 and is expected to reach 19.5 billion USD by the end of 2026, growing at a CAGR of 6.7% during 2021-2026. However, most of these glittering sequins are made from non-degradable, fossil fuel based synthetic plastics such as polyester and polyamide. In the UK, Research by Oxfam found 1.7 million sequined items of clothing will end up in UK landfill after Christmas, and those synthetic sequins have been one of the major fashion components hindering the recycling of fashion products.

In this new era following the global coronavirus pandemic, few consumers think the fashion sector should go back to business as usual and most of them want to see the fashion sector doing whatever it takes to become environmentally sustainable. This project is timely for fashion industry to rebuild, reimagine and renew its supply chains in a more authentically sustainable manner.

The Sustainable Sequin Company (TSSC), which was founded with the aim to bring sustainable embellishments to the UK fashion industry and currently provides 20% recycled PET sequins to international fashion brands and individual designers, will work with the University of Leeds (UoL), to create commercially viable, durable and biodegradable bioplastic sequins to reduce the environmental impacts associated with synthetic sequins.

We intend to establish a sustainable value chain, which borrows renewable biomaterials from the biological carbon cycle to allow the creation of low-impact, compostable, UK made sequins. A new biodegradable bioplastic film will be synthesised, formulated and prototyped, originated from either plant-based polymers or municipal waste sources. Its properties will be improved to achieve targeted performances required by sequins. A UK bioplastic film production supply chain, including key UK plastic film manufacturers, will be established ready for large-scale production of environmentally friendly sequins which are both functional and durable in cyclic washing/laundry processes.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INDUSTRIAL TOMOGRAPHY SYSTEMS LTD	Smart Column Tomography Sensor	£99,824	£99,824

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

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

## Project description - provided by applicants

Industrial Tomography Systems Ltd (ITS) is a designer and manufacturer of sophisticated instrumentation providing major insight into process operations.

Our products have global markets and future potential for Industry-4, with world leading process customers such as GSK, AstraZeneca, Unilever, Proctor & Gamble, Nestle, Dow Chemicals, Johnson Matthey, BP and many others. ITS is a high technology export led company, with more than 80% of export sales.

In this project, we aim to enhance our support for a growing needs in the post-COVID pharmaceutical market, where our innovation promises major enhancements in product quality and efficiency with reduced waste and emissions. Our target is processes which are energy-intensive with high levels of waste. Our process monitoring capability provides key information to reduce overall energy burden supporting global post-COVID decarbonisation targets. Accurate knowledge of process materials can support the new post-COVID potential for circular economy recycling.

This project addresses the globally common target 'packed column' process in which reagents react to form a final or intermediate product. The project aims to create a Smart Column which addresses post-COVID priorities in delivering increased efficiency, product quality and plant utilisation coupled with reduced waste and emissions and positively supporting circular economy major recycling of secondary materials.

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

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Total available funding is £38.6m

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DO IT SERVICES LTD	Sustainable Wellbeing Experience Tool	£99,407	£99,407

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

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

## Project description - provided by applicants

Mental illness already costs UK employers billions every year, and employee wellbeing is at risk of becoming a follow-on epidemic after the COVID crisis. Individuals, organisations and society as a whole would suffer.

There are plenty of employee wellbeing apps, but they universally miss the opportunity to involve their users in their communities and according to the NHS this is one of the best things we can do for our wellbeing. As a result people can find it difficult to find what's right for them, whether that's volunteering, a physical activity, a group activity or something else.

Do IT is the only nationwide platform connecting people to do good things in their communities. Centre for Thriving Places is a leader in wellbeing measurement science. Together we plan to develop a sustainable wellbeing experience tool on the Do IT platform that will transform how users connect and find things to do.

It will be good for individuals, good for organisations, good for society and good for the environment.

While we will initially target the employee wellbeing market in the UK, our solution also has applications in local and central government, and overseas.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ENTERPRISE EXCHANGE ENTERPRISE LIMITED	Virtual Reality Self-Employment Training Programme	£82,524	£82,524

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

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



Project description - provided by applicants

Self-employment programme that uses Virtual Reality as a training platform within the prisons estate.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PODIUM NETWORK LTD	Hive - a decentralized solution for ethical data science	£99,599	£99,599

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 traditional solutions, the conflict between data privacy and data utility has negatively impacted both. GDPR legislation was designed to facilitate informed consent, but the result has been frustrating layers of friction, where a user's only real choices are to blindly agree or reject a service entirely - providing no improvement in transparency or trust.

The failure of the UK's Covid-19 Track-and-Trace system is just the most recent example where this trade-off has resulted in significant economic and personal loss.

Hive is a game-changing data solution that delivers guaranteed privacy and next-generation data utility.

Delivered as an SDK to app developers, it provides regulation-compliant data infrastructure for any app while streamlining development -- reducing costs, and providing better service to customers.

Hive's simple, universal interface means users can give meaningful informed consent to data use across all Hive-powered apps, knowing what data will be gathered and how it will be used.

Built on cutting-edge Distributed Ledger Technology, Hive distributes data across a vast, collaborative network of devices - guaranteeing that no single entity (not even the app developer) receives enough information to identify any user; while still allowing personal information to be retrieved by the user themselves.

This project develops the core Hive Software Development Kit (SDK) and the decentralised protocol through which Hive nodes communicate, producing a working prototype readily for live application.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
INTELLIGENT ENERGY LIMITED	Fuel cells for sustainable intralogistics	£274,800	£98,928

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

Intelligent Energy (IE) commenced investment in development of a hydrogen fuel cell (FC) power system for class 3 order picker trucks to be used in material handling equipment (MHE) operations throughout UK & European intralogistics facilities.

FC power systems provide class 3 trucks with a rapid power response, zero emissions and extended run-times, providing multiple operating and cost benefits over lithium and lead-acid battery systems for high intensity 24/7/365 intralogistics operations.

The first stages of the product development and investment programme had progressed well. COVID-19 then disrupted product Verification activities. The Verification stage in the FC MHE product development programme is a necessary precursor to Certification. CE Certification is essential to allow UK -- European product sales which is a key outcome from the project

The project comprises 3 Work Packages to meet an 'as early as possible' market release date for the FC power system product. The risk of further disruption from COVID-19 spikes and local control measures has been acknowledged in the 6-month project duration.

Fuel cell power systems are sustainable in the context of intralogistics operations. FCs have zero emissions and high life cycle analysis (LCA) sustainability when used with green hydrogen. No hazardous, rare earth minerals or similar inputs are extracted for input to processing and FC production. Essentially all components of a FC and their packaging can be recycled, with no hazardous material disposal needed.

FC adoption in the intralogistics sector supports circular economy progress. The integration of FC-MHE fleets into intralogistics facilities will provide the basis for hydrogen refuelling infrastructure, facilitating introduction of FC van and truck fleets for local distribution and trunking services.

The project supports early stage post COVID-19 recovery for IE, for Verification services, and IE's materials and components supply chain. Longer term economic benefits will accrue through manufacture of the FC-MHE product in the UK.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
D2H ENGINEERING SERVICES LTD	CADChecker	£83,481	£83,481

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 marked, detrimental impact on the car industry in the UK and around the globe. Furthermore, automotive development is in the midst of the greatest upheaval since the design of the first cars: electrification, connectivity and autonomy, alongside new players, are rapidly altering the marketplace. Moving to brand new vehicle platforms is seeing traditional and relatively simple iterative design being replaced by wholesale conceptual changes. Expensive and time-consuming manufacture and testing of prototype vehicles is being superseded by digital simulation and analysis.

However, the development of the software tools allowing information to be passed from the Computer Aided Design (CAD) environment, which underpins the whole vehicle development process, into the digital simulation tools has not kept pace with the marketplace transformation that is occurring. Typically, this means approximation and simplification is undertaken which inevitably reduces the accuracy and increases the frequency of failure of those simulations. Overall, this costs time and money, delaying the delivery of new vehicles to market.

The CADChecker project will create a universal CAD-software plugin enabling the design engineer to ensure that only accurate, detailed, clean CAD data that meets defined company standards is ever outputted to those downstream simulation tools. This will deliver higher data quality than current methods without any slowdown, significantly reducing failures in expensive simulation processes whilst increasing accuracy. CADChecker will enable faster and cheaper design in an industry struggling post-COVID, improving business efficiency and enabling OEMs to get their new electrified vehicles to market sooner.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
UVROBOTICS LIMITED	Development of a Low Cost Robotic Ultraviolet (UV) Disinfection System, which will Enable Thorough, Rapid Cleaning of Public and Private Places	£99,841	£99,841

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

In response to the global COVID-19 pandemic and the need to clean and disinfect spaces, the co-founders of UVRobotics (Michal Kostyal, Arnav Bisoi and Emre Serpen) pivoted their robot waiter product to propose a UV robot for disinfection. UVRobotics plans to create an affordable, easy-to-use robot for UV disinfecting with considerably lower price than current competitors and unique monitoring mobile app. This innovation could save thousands of lives through high-quality UV disinfection. Should UVRobotics be successful its innovation could generate a year-five post-project revenue of £10M.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DEM DX LIMITED	Dem Dx Elderly Care Triage Platform	£89,818	£89,818

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

### **\*\*Growing role of Advanced Practitioners in the healthcare workforce\*\***

An urgent challenge in the healthcare sector is the increasing demands on global health systems caused by a growing, ageing population and a constrained supply of doctors. The World Health Organisation has called for 6m additional nurses by 2030, from the existing 20m today, to achieve global health targets, and for their roles to be expanded to take on more clinical diagnostic responsibilities. COVID-19 and the ongoing management of the pandemic is putting a sector already stretched in terms of resource and finance under unprecedented additional strain.

### **\*\*Innovation in AI driven clinical decision support systems\*\***

There are many clinical decision support systems available for healthcare professionals; in the primary care setting, only a handful have artificial Intelligence (AI) integrated into their platform. Most are targeted at doctors and assume a high level of clinical knowledge with medical inferences required by the user. There are currently no clinical decision support systems aimed specifically at the advanced practitioner (AP) workforce (nurses, paramedics, physicians associates) in triage.

### **\*\*Project scope\*\***

This 6 month industrial research project aims to leverage the AI algorithms already developed during a project with Moorfields Eye Hospital and deploy and test them in a new specialty. The AI driven Elderly Care Product directly targeting APs, supporting them in delivering safe and responsive care in the community and urgent care centres. This project will also gain user feedback to assess ECTP's potential for clinical and operational effectiveness, starting initially with the urgent care centre setting and assessing if it can help reduce emergency hospital admissions and treat more patients safely in their homes.

### **\*\*Subcontractors\*\***

The Project will be led by an award winning medtech SME, DemDx, supported by two key subcontractors: Bury and Rochdale urgent care centre (BRUCC) and University of Exeter Collaboration for Academic Primary Care (APEX).

DemDx has successfully commercialised an award winning medical education tool (MedEd) that covers 14 specialities and 50,000 medical clinical reasoning pathways; it is being used extensively as a medical educational tool both by institutions and individuals globally across 176 countries. It has also developed specific secondary care Artificial Intelligence pathways and triage pathways currently in use at Moorfields Eye Hospital.

BRUCC, part of the Northern Care Alliance NHS Group, plays a pivotal access point between care in the community and emergency admission.

APEX, run by Prof. Hamilton, an eminent leader in primary care diagnostic research (clinical lead on the NICE guidance-'Referral for Suspected Cancer-NG12), specialises in primary care research in large scale technology implementation and effectiveness studies.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EMBED LIMITED	BootIACES - Bootloader for Autonomous Connected Embedded Systems	£67,683	£67,683

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

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

Project description - provided by applicants

BootLACES is a project to develop a novel scalable bootloader for use in automotive ECU's and other embedded systems. It will offer improved cyber security, size and usability to become the preferred choice for automotive applications, overcoming the complexity issues caused by having a plethora of bootloaders.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LIGHTRICITY LIMITED	4EvAirSense: a retrofittable, self-powered and maintenance-free LoRa wireless indoor air quality sensing platform for ventilation improvement enabling safe and healthy environments	£90,030	£90,030

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 economic and social impact of Covid-19 is evident in the constraints placed on businesses, schools and various public and private indoor spaces with regards to occupancy and ensuring safe return-to-work strategies. Exhaled CO2 affects human health at levels as low as 1,000 ppm, commonly observed in crowded, poorly ventilated rooms. Many countries have or are setting maximum Permissible Exposure Limits. Covid-19 mitigation strategies also cite improved ventilation, regularly exchanging indoor air with fresh outdoor air, as key to reducing indoor airborne virus transmission.

Whilst the sophisticated ventilation systems can automatically manage IAQ, there is a clear opportunity to develop affordable technical solutions based on CO2 monitoring that support improvements to ventilation for the widest possible range of users. There is also clear Covid-19 economic impact mitigation in reducing the operating costs e.g. energy usage and system maintenance, by introducing more efficient ventilation control options that are retrofittable and have lower cost of installation and ownership than competing options.

This project develops an autonomous prototype wirelessly communicating self-powered CO2 sensor device beyond current state-of-the-art to enable effective ventilation control. Combining GSS's new ultra-low power NDIR CO2 sensor, LoRa wireless communication and Lightricity world-leading indoor PV along with further sensors (Temperature/Humidity/Pressure/Light -- for further IAQ information and device management) in a miniaturised package would deliver the world's first truly self-powered long-range wireless CO2 sensor nodes for ventilation control and occupancy determination.

With only one gateway per building and long wireless range (km), LoRa Wide Area Network saves the deployment cost of multiple gateways per building compared with SoA short-range wireless approaches (Wifi, BLE, EnOcean) enabling much easier installation, maintenance and better affordability to different types of users e.g. individuals, housing associations, residential care homes. It enables economic fit-and-forget retrofitting/upgrading of control or adjustment notification to facilities managers and allows care home and residential users to be notified for simple, practical actions like opening windows when air quality indicates insufficient ventilation. The project builds upon previous feasibility work powering a short-range CO2 wireless sensor using Lightricity PV and significantly extends functionality and capability beyond the state-of-the-art in wireless CO2 sensors.

The solution is sustainable through better ventilation control reducing wasted energy and using a renewable energy source (PV) to avoid environmental impact of battery waste. It is also inclusive in bringing ventilation control options and therefore health to the widest possible range of users.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INTEGRATED TRANSPORT PLANNING LIMITED	OD Visualiser - a tool to understand and analyse transport matrix data in low-income countries	£53,704	£53,704

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

Origin-destination (OD) matrices are a common data format used in transport planning, for understanding 'flows' of passengers, freight, or vehicles and making decisions. However, expensive modelling software or considerable geographic information systems (GIS) expertise is often needed to process and understand the mapping associated, and turn it into actionable intelligence. We therefore want to lower the boundaries for transport practitioners (city planners, bus operators, other consultancies) to be able to make **\*\*data-led decisions\*\*** - with better understanding of the outputs of complex modelling tools and the ability to rapidly exploit emerging sources of data such as mobile phone records.

Integrated Transport Planning Ltd (ITP) has developed a proof-of-concept prototype which presents a usable mapping-based online interface for understanding OD matrix data. Users are able to click on zones, see zone-to-zone flows, and aggregate and query statistics 'between' pairs or sets of zones. This is fundamental to managing accurate and timely decision-making for public transport and active travel -- more important than ever in the wake of the COVID19 pandemic and resulting global recession.

Through this project, we aim to improve the data loading and usability features of this prototype. Intended to be able to process zone OD data and geography from a number of common formats, the tool will automate many of the preprocessing steps required and permit uploading of custom geographic data of different types. The project aims for the OD Visualisation tool to reach a standard that we can better exploit both internally as a company, and through collaboration with our partners in the UK and internationally.

Reducing the need for GIS expertise and time consuming data manipulation in understanding transport models will have a significant benefit for sustainability worldwide, as city governments and service operators meet the challenges of recovering from COVID-19 and aim to encourage greater use of public transport and walking and cycling. The ability to rapidly understand OD data from different sources will also greatly improve ITP's (and that of other smaller consultancies and partners) competitiveness with larger transport planning consultancies, who have often been the only parties with the resources for deploying large-scale transport 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 INFRASTRUCTURE TECHNOLOGY LTD	Carbon Flow Modelling	£99,966	£99,966

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

This project explores industry applications of carbon flow modelling to assist in the measurement and reduction of carbon emissions in industry.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOAMTECH SYSTEMS LTD	Creation of an Innovative Prototype Slimline Watermould System to deliver our Super Heated Water Structural Foam Moulding Technology - Watermould	£98,998	£98,998

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

Structural thermoplastic foam-moulded parts are much lighter, with higher strength-to-weight ratio than solid plastic. The automotive sector is the main driver to structural foam growth as lifetime energy & CO2 savings drive the need for lightweight components. There is growing demand for foam mouldings, but there is a need for good surface finish.

In the State of the Art, foamed parts are produced by a form of injection moulding using a chemical blowing agent or gas (HFCs, Butane, N2 or CO2). These foaming processes fail to achieve good surface finish due to low process pressure, heat absorption by blowing agent and bubbles forming at part surface, often with a characteristic swirl pattern preventing use of this technology for good quality surface finish parts.

FoamTech Systems Ltd has been working on the technology to replace hazardous foaming agents with water and have tried several methods for introducing the water into the molten polymer in various ways and forms. The Watermould process has shown the most promise, and we are now in a position to develop the process further with the view to commercialising it and exploiting a growing market opportunity.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 POLLARD MANAGEMENT COMPANY LIMITED	Researching, developing and market-testing an evidence-based promotional campaign and sponsorship marketing package to build the inclusivity and commercial growth of online mental health training for parents.	£99,914	£99,914

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

12.8% of 5-19 year olds have a clinically diagnosable mental illness. This is 1.5 million children and young people in the UK. And contemporary data show this to be worsening due to Covid19, as 43% of psychiatrists report significantly increased emergency mental health cases.

Currently, in the UK, less than a third of children and young people with a mental illness receive appropriate treatment at a sufficiently early stage, even though it is well established that early intervention facilitates a full and sustained recovery. Given that 73.9% of adult mental illnesses began in childhood, untreated childhood mental illness results in life-long costs to individuals, families, the NHS and the wider economy.

However, pro-active self-help facilitated by the child's parents, is effective as a first-line treatment for mental ill-health, if parents are trained and equipped with the necessary knowledge and skills. We have produced an online course for parents, called "Building Your Family Mental Health". This draws upon the King's College New Maudsley Method for training families in 'skills-based caring'.

Now we are researching, developing and market-testing a sponsorship package for companies, combined with an evidence-based promotional campaign geared for fathers in the socio-economic groups which are currently under-served in the provision of mental health support. This will normalise the development of vital knowledge and skills and make the "Building Your Family Mental Health" course freely available to such fathers.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRULIFE OPTICS LIMITED	Floating holograms for contactless interfaces	£98,176	£98,176

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 recent COVID19 outbreak has shown that touching buttons in a public space presents risks of viral spread. Buttons pervade public spaces, from toilet flushing, and elevator controls to keypads on ATM's. TruLife Optics wants to use its expertise as a world leader in holography to make such interfaces safe, by developing holograms that project the image of a button or a key pad in mid-air, so users can interact with such floating images twinned with a sensor, avoiding touching any physical surface.

Currently, contact-free infrared sensors have the disadvantage that they do not provide a visual cue, i.e., they do not show where to swipe nor when they have been activated. Think about how difficult it can be to use a water tap in a public toilet! TruLife Optics will develop a novel hologram prototype that generate a floating image of two lift call buttons. These buttons will be shown in a U shaped display with light and sensor. The hologram will be seen to float in mid air - 4 cm from the floor of the unit (meaning it will be hard to touch the physical surface). A finger sensor will detect which of the up or down buttons has been pressed and an audio indication of up or down will be given.

The holograms will be designed so that the buttons can be easily seen from a wide range of viewpoints. Also, when coming closer, one or several buttons , or numbers will indicate exactly where to press or swipe. The image to be projected, i.e., a button, a keypad, an arrow, or a combination of these, can be adapted quite straightforwardly to the application in mind. The first laboratory prototypes will focus on showing a single interactive entity, i.e., a button,

In later stages (not part of this funding) we will have feedback on the holograms themselves. The hologram can be illuminated by two LED's with different colours, e.g., a green and a red light. As a result, the colour of the button is an indication of whether is it on or off. We are in touch with sensor suppliers to evaluate how to pair the sensor with the hologram.

A second generation will build upon the idea of the floating button, i.e., it will generate a numeric floating keypad, like those on an ATM machine, twinned with a commercially available finger tracking sensor. We will build a demo showing numbers appearing on a screen as the floating keypad is "pressed" in mid air.

We have multiple enquiries from potential customers and we have a partnership with a leading sensor company who wants to co-develop the technology and twin our holograms with their sensors and then market to all their customers.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ELT JAM LEARNING LIMITED	Toolkit for inclusivity in digital education	£71,921	£71,921

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

We are a digital learning agency, working with commercial learning and training providers to help them develop online courses and learning programmes. Our clients include educational publishers, corporate learning and development departments, educational technology companies and trainers. The COVID-19 crisis has brought about a huge and rapid growth in demand for online learning, and is therefore a significant opportunity for growth in our sector. The last few months have been characterised by a rush to move existing in-person learning online, often with little time for detailed consideration of online learning best practice. This can result in courses and training programmes which are not as effective as their in-person equivalents, and which exclude many learners who would benefit from them, as the need for reskilling and upskilling becomes more critical than ever in a COVID-19 impacted economy.

As online learning becomes the 'new normal', we are looking to do everything possible to ensure that online and blended courses are as effective and accessible as their in-person equivalents. One specific area where many online courses are currently lacking is in their support for disadvantaged and marginalised learners -- whether that is people who lack the necessary computer equipment to participate, those whose circumstances make remote learning difficult or impossible, those with disabilities, or those facing discrimination. This issue has received significant publicity recently in the UK state education sector, but awareness within the commercial learning market of EDI (equality, diversity and inclusion) issues in online course design and development is patchy at best.

In response to this, we will be researching and developing an **\*\*EDI Framework and Toolkit for online learning\*\***. This will provide a structured way for providers to assess current levels of EDI compliance, make recommendations for improvements, and provide tools to support the process of upgrading and enhancing courses. It will also act as a guiding framework for the design of new courses, with clear best practices set out, supported by instructional materials and checklists.

We believe that online learning has the potential to increase opportunities for everyone in society, but only if it is done in the right way. That's why we feel the issue of digital exclusion is something that must be tackled in all sectors of learning as a matter of urgency.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KOOLMILL SYSTEMS LIMITED	Efficient Husking of cereals to improve Bran Purity, value and utilisation	£94,348	£94,348

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

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

## Project description - provided by applicants

Koolmill and the National Centre of Excellence for Food Engineering (NCEFE) collaborated to develop an improved rice milling system and valorise the by-products of rice milling (102755/105862). Specifically, these projects target SME millers in Rural communities: the objective is to create and retain added value in rural communities transforming smallholder growers/SME Millers, from low value commodity producers, to market leading added value food processors.

Traditional rice milling comprises two processes: husking and bran removal. Husking is achieved by passing the paddy (raw rice) between two rotating rubber rolls being pushed together under pressure. Think old-style mangle for squeezing water from washing: that's a 'modern' husker. Bran is 'milled' from the brown rice in multiple processes (typically up to 5) producing finished white rice.

The two processes are fundamentally different. Husking is a 'one-shot' operation to remove the fibrous husk and bran removal is a gradual process through multiple contacts within the milling chambers of abrasive or frictional machines.

Traditional huskers are a pain for millers, requiring regular maintenance and repair. Husking rolls have a relatively short life at around 24 hours. Setting huskers is a compromise between husking efficiency and broken brown rice. Higher closing pressures increase the husking efficiency but result in higher levels of broken rice. Reducing closing pressures reduces broken rice but with poor husking efficiency.

102755/105862 improved bran milling performance, increasing the power saving from 80% to over 90% and milling chamber capacity from 60 to 150kg/hr/chamber. Milling from brown to white, the bran removed is pure, very fine and will generate significant new revenue streams for rice millers. This value is dependent on the purity of the bran.

Koolmill has previously demonstrated the capability of coated abrasives to be an effective husking medium. The loss in capacity from paddy to white compared to brown to white milling was only 4%, with a relatively high husking efficiency, over 80% power savings and reducing white broken rice from 30% to less than 5%.

The downside of this increased bran milling performance is a reduction in husking efficiency, and the combination of husk and bran discharged together reducing the purity and potential value of the bran. With over 75 million tonnes of rice bran produced the opportunity is to take bran from a low-value waste, used for oil extraction and animal feed, to a valuable and nutritional beneficial human food ingredient.

There are many nutrition bioactives stored naturally within cereal brans including a range of biotechnology approaches for improving fibre, phytosterols, polyphenols, phenolic acids, antioxidants. These can be enhanced or made more bio-available through secondary processing.

Realising that value is dependent on fine clean bran driving the need for a separate husker. The industry is ready for new more efficient husking option and this would confirm Koolmill and NCEFE as global thought leaders in cereal milling, offering a unique ultra-low power paddy to white milling solution set to transform a global market projected to purchase \$4 billion of rice milling equipment over the next 5-years.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HIVE COMPOSITES LIMITED	Fire protection of lightweight EV battery cases using nanotechnology (PFP_Nano)	£94,075	£94,075

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 reduced road and air transport during the COVID lockdown resulted in visibly clearer and cleaner air and has made many assess the impact of transport on the air that we breathe. Electric propulsion for cars, buses, trains, and planes supports the **transition** to **lower emission** transport. The battery of choice for these applications are Lithium Ion Batteries (LIB). For safe use, the battery packs must be maintained within a defined voltage and temperature window; limits can be exceeded by damage (accidents, rapid deceleration etc), excessive external temperatures, charging too quickly, overcharging or manufacturing defects. Chemical reactions may be triggered internally leading to a short circuit or increase in the temperature which can lead to thermal runaway and the LIBs catching fire. Hence, there is a need to provide lithium ion battery fire containment for as long as possible to aid occupant evacuation in auto, marine, rail and aerospace sectors.

Most LIB casings are made from metal (steel, aluminium) providing mechanical support to the cells. These battery casings are typically heavy; lighter versions can be made using carbon-fibre-reinforced polymers (CFRP) and several prototype CFRP battery cases have been developed. However, there are no known solutions that combine lightweight CFRP structural battery cases with intrinsic fire containment.

HIVE is an innovation-based business developing disruptive composite materials technologies with significant potential for growth and scale-up. Hive have a carbon-nanotube (CNT) based solution that can be incorporated into resins and/or deployed on the surface of structural CFRP to impart multi-functionality through significantly improved fire and thermal conductivity whilst maintaining structural performance. When coated on a composite material, preliminary tests have shown the time to ignition of the parent material is doubled. Thermal conductivity of the composite materials will also be modified for better thermal management of the batteries. The weight of the CNT materials either within the matrix or on the surface of the composite battery cases will add a few grammes to the overall composite battery case but has the opportunity to double the containment time for a battery fire, thereby adding passive safety for occupants at minimal weight and cost. Use of composite battery cases will therefore reduce overall battery pack weight compared with metallic versions.

This project will develop a **cost-effective passive fire protection material system** for composite battery cases using a unique format of Carbon nanotube (CNT) materials and will generate the data to demonstrate the performance of these materials for implementation across multiple transport sectors.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FAIRACRE SUPPORT LIMITED	By ICU Clinicians: Patent-pending device to reduce ICU nursing staff workload in managing patients coming off ventilation focussed on reducing lifting and transmission risk	£74,346	£74,346

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

**\*\*Context\*\*:** Due to COVID-19 each ICU nurse is now looking after at least 3 patients when they are taken off a ventilator, rather than the pre-COVID-19 recommended maximum of 1 nurse for every 2 patients.

The attrition of nurses due to being exposed to COVID-19 (i.e. less nurses available) along with increased workload resulting from more cases, creates a need to use new working methods/technologies to reduce nursing workload.

**\*\*Vision:** To develop a simple mechanical device to ensure patients remain in the best position to optimize the mechanics of their breathing (ventilation) and hence oxygenation, improving patient outcomes while reducing the need for nurses to physically move patients. **\*\***

This is important as in an ICU many of the patients will need reposition at least once per day, resulting in clinical staff repositioning patients typically 12 times per day across the patients they care for. Reducing the need to reposition patients reduces the physical stress from repeated lifting (a major cause of injury to nursing staff) and reduces direct patient contact (important in reducing transmission risk).

**\*\*Objective\*\*:** To complete development of a device for trial in a National Health Service ('NHS') Intensive Care Unit (ICU) that will **\*\*maintain patients in the optimal breathing position for oxygenation and workload when they are 'extubated'\*\*** (i.e. come-off artificial ventilation) and reduce nursing workload and the risk of transmission.

**\*\*Focus\*\*:** When patients are extubated they are frequently extremely weak due to a combination of factors (illness, injury and the drugs used in their treatment). To improve the mechanics of breathing, they are sat up in their ICU beds which bend in the middle to facilitate a reclined upright position. Often however, due to their loss of muscle strength, the patients are unable to maintain this position and slide down the bed. This can then compromise their breathing and cause their oxygen saturation to drop.

In an ICU or High-Dependency Unit (HDU) one often hears the blood oxygen saturation meters alarming. Ordinarily one of the nursing team will assess the patient and, in many cases, all that is required to restore satisfactory oxygenation is to reposition the patient to restore the optimal position for efficient ventilation which typically takes 2 nurses 5 minutes each.

**\*\*Focus:** Reduce/eliminate the need to reposition patients in order to reduce nurse workload. **\*\***

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACCURATE SAFETY LIMITED	StairFast Construction site stair safety system, using Digital/AR enhancement	£88,861	£88,861

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

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

## Project description - provided by applicants

Accurate Safety Ltd design and supplies best in class construction site safety edge protection, to prevent falls from height - the leading cause of deaths and injuries in construction, according to the Health and Safety Executive. Internal stairwells without balustrades pose a particular risk for contractors working on construction sites, in addition to the new social distancing requirements, which this innovation can help improve significantly.

COVID-19 has reduced the turnover of Accurate Safety significantly, this grant would help us rapidly recover our sales position, by the launch of this innovative and commercially viable solution, we've called StairFast.

We have a fabrication partner in China, which has created a prototype. However, Covid-19 has highlighted the vulnerability of this supply chain, since any future lockdown in China would threaten our ability to take StairFast to market. It has effectively stalled development.

Bringing manufacturing back to the UK overcomes this threat, while also providing employment during a recession, which is a direct result of the Covid- 19 pandemic.

### **\*\*Current solutions\*\***

There are some edge protection systems for stairwells already on the market, however, they are typically made up of several different components and require scaffolding poles to be individually cut to size. This increases the risk of losing integral components. They also need to be drilled into the concrete slabs of the stairwell, which causes dust during installation, and requires the stairwell to be repaired before project completion.

### **\*\*StairFast\*\***

Therefore, in 2019 we began developing a new steel modular stairwell protection system, to solve issues with current products. StairFast was born and comprises of telescopic handrails, posts and secure fixing clamps, which are available in a range of sizes to suit different configurations.

StairFast also incorporates HSE signage on the handrails, such as 'on-way' to promote social distancing protocols contained in the Construction Leadership Council's Covid-19 operating procedures.

We also have plans as part of the project, to develop proprietary 3D modelling software accessible through an app, allowing site managers and quantity surveyors to calculate exact volumes of equipment required. This 'right equipment at the right time approach', reduces waste and costs, but also double handling of materials to decrease risk of Covid-19 transmission.

### **\*\*Summary\*\***

- \* Will help AS Ltd to rapidly grow with two company's supporting project
- \* Quick and safe to install/dismantle, improving efficiency and productivity

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

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

- \* Project team have 20 years combined experience in Edge Protection
- \* Non-invasive fixing, avoids drill dust/repairs
- \* Digital solution for exact quantities, reducing Landfill waste
- \* Promotes Covid-19 social distancing protocols
- \* Designed to be installed into Cross Laminated Timber, also important in helping reduce Carbon Emissions.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PENINSULA MEDICAL TECHNOLOGIES LTD	Flexible, Intelligent and Environmentally Efficient Anaesthesia Machines	£126,984	£99,048

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

Anaesthesia machines have provided most of the emergency extra critical care needs required during the COVID-19 pandemic. However, issues in the use of these machines for intensive care ventilation such as moisture control, unfamiliar user interfaces and basic ventilation modes unsuitable for unwell COVID patients were highlighted. The potential benefits of being able to use volatile anaesthetic such as Sevoflurane but absence of required scavenging in intensive care was also apparent, especially when IV sedation stocks nearly ran out. Volatile anaesthesia is changing due to environmental pressure on these compounds with high global warming potential- they make up 5% of the NHS carbon footprint and are now a target of government guidelines and targets.

Anaesthetic recycling systems have been developed and are coming to market in 2021 with the potential to change a mature anaesthetic machine market with little significant innovation for many years. The current stock of anaesthetic machines are not designed to work well with these systems and therefore, there is an opportunity to develop anaesthetic machines that are capable of the flexibility and performance required post-pandemic and also that are environmentally efficient to deliver the future of anaesthesia and allow use of volatile anaesthetic agents throughout the hospital space without scavenging and piped gas systems. This has the potential to significantly reduce infrastructure costs for the NHS in excess of the anaesthetic machine costs.

This project is to develop, test and build two prototype anaesthetic machines that are optimised for recycling systems and flexibility, based on intellectual property from Peninsula Medical Technology. The technology provides a way to integrate the needs for environmental efficiency with the lessons from the COVID-19 pandemic and generate the next generation of anaesthetic machines. It also provides the necessary regulatory input and independent assessment of environmental goals required.

The anaesthetic machine market is a mature market with limited innovation and high barriers to entry, led by companies in the USA and Germany. The changes from COVID-19 and environmental pressures enable space for new technologies and entrants that would typically be denied. This is assisted by access to developed ventilator technologies from the UK ventilator challenge to generate a UK-based solution.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Live prediction of seat-availability for bus passengers from real time bus occupancy and location data	£99,648	£99,648

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

Social distancing measures have reduced the effective capacity of buses to 40% of regular capacity. Although many routes are not currently busy enough to be commercially viable overall, they can be too busy at certain times and passengers are being turned away as a result. With passengers already nervous about using public transport - such instances may prevent passengers from using the bus in the future.

Operators must find ways to build confidence in bus services through improved passenger information that is reliable and constantly updated. Specifically, there is a need to provide passengers with information on the space available on buses, so passengers know if they will be able to board and if they will be comfortable with the experience. This information must go beyond advance planning tools, and provide real time, continuously updated predictions of the space on specific buses at specific stops.

Our proposal will provide a real time data feed of expected arrival time and predicted passenger space for every vehicle and every bus stop on a bus route. This goes beyond existing solutions by combining real time occupancy sensing with real time prediction of boarding and alighting further down the route. The feed will be continuously updated and can be integrated into a wider range of passenger facing services, including passengers apps, digital bus stop signage and journey planning tools.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
3H Technologies Ltd	Low cost, long life water sterilisation reactor development using general lighting LEDs and photosensitizer loaded surfaces.	£99,469	£99,469

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

Development of a low cost and long life water sterilisation reactor based on photosensitizers and LED light to provide pathogen free water for drinking and general use at a flow rate of up to 10 litres per minute. Reactor will covalently bond the photosensitizers to the internal surfaces and control the flow path of the water to ensure maximum exposure of the water to the reactive oxygen species released from the photocatalytic process to achieve the sterilisation.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Falcon Foodservice Equipment (a trading Division of The AFE Group Ltd, Company Number 3872673)	INtelligent FOod Recognition and Monitoring for patient wellbeing (INFORM)	£99,571	£99,571

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

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

## Project description - provided by applicants

Caloric intake from meals provides crucial data for patients' wellbeing in hospitals, care homes and other places. Such data helps to monitor patients' recovery process and fine tune any required medical attention. At present this data is manually collected by the care assistants which leads to paper trails followed by a data entry to the system. The manual data collection in a hospital or care home poses risk of contamination and spread of infectious diseases especially in the current Covid-19 situation. The manual estimation of the consumption is often not accurate and erroneous. Therefore, there is a gap in the market that can efficiently address these issues, for example, collecting such information accurately in a non-invasive way.

This project proposes to develop a 'Smart Catering Trolley' that uses computer vision and IoT to automatically record how much of each food a patient in hospital, or care home resident, consumes. This will allow care providers to accurately track the nutritional intake of patients and provide increased quality of care, while alleviating the workload of staff, and reduce the chances for the transmission of Covid-19 to the most vulnerable. It will also reduce the quantity of food waste, preserving valuable NHS and care homes resources and reducing environmental impacts. This will be achieved through a collaboration between the Stirling Vision and Image Processing research group at University of Stirling and Falcon Foodservice Equipment.

A set of optical and thermal cameras will be fitted to catering trolley which will capture what is served at what temperature to individual patients using a unique computer vision algorithm deployed on a portable embedded hardware (e.g., Raspberry Pi). The algorithm will calculate how much of each food a patient has eaten, allowing medical professionals to accurately track their diets over the course of their stay, ensuring that they have the nutrients they need to recover as quickly as possible. Additionally, the smart trolley will have capability to store and reheat the food at the point of serving. The generated data will be sent to a computing server using the UK's existing IoT infrastructure for further analysis of the patient nutrient data. The use of IoT networks will reduce the reliance of the system on the Internet which is often not available in the hospital environment. This innovative solution will be useful for a large number of NHS hospitals and care homes across the UK and internationally aiding social distancing which is expected to be the new normal.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BIOTIP LTD	A-ROAD TRL4 to TRL7 prototype to commercial ready	£99,937	£99,937

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 government's well publicised finding that current SARS-CoV-2 antibody assays were inadequate, the case for a reliable and robust test was made by Sir John Bell, Regius Professor of Medicine at the University of Oxford and a government adviser on life sciences stating, how "We see many false negatives (tests where no antibody is detected despite the fact we know it is there) and we also see false positives". In fact, most tests analysed failed to detect antibodies half the time they were known to be present with the best tests managing 70%, falling well short of the required 95% success.

Despite the improved confidence available with recent Abbot and Roche antibody tests, home finger-prick testing has been removed from the market until the MHRA is able to ensure test stability and ease of use. Consequently, the only resultant testing available still depends heavily on the labour intensive Test and Trace program that requires PCR analysis in a centralised laboratory.

Our test is designed to detect antibodies against Covid-19 in blood samples, and will be adapted to detect evidence of the virus itself ('antigens') in saliva samples. The test can be performed at home, in the workplace, in hospitals and schools and even at airports, at costs that we hope will make routine testing affordable. Early experiments suggest that our test may be 200-fold more sensitive than current antibody tests, and we aim to achieve to achieve 98% detection (within a 95% confidence interval). If we are able to reproduce this for antigen detection, we may be able to replace PCR testing with a more delocalised approach.

In contrast to other LFAs, the result will be confirmed electrically as a binary positive or negative to remove any ambiguity. This allows us to digitise the test and display the result on a smartphone for real-time interpretation by the patient, as well as transmitting the result instantaneously to the employer, a government body or healthcare provider. For the first time, people will know where and when Covid-19 is encountered in real time.

The assay will take the format of a home finger-prick LFA because of its familiarity which requires no further equipment, specialist training and, which is already able to be mass manufactured. The test will use a new electrical platform which will be reusable. Using Innovate UK funding to address the immediate and urgent need for response to the current pandemic, we are building SARS-CoV2 specific assays. In the future, our ground-breaking technology will be a generic platform for the detection of other pathogens and environmental contaminants.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
WESTCOUNTRY RIVERS TRUST	Cow to Catchment Monitoring (CCM)	£79,906	£79,906

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

The Cow to Catchment Monitoring (CCM) project is part of a wider initiative to set up a remote monitoring network across a small test catchment linked to Duchy College and other farms and landowners in the catchment in order to receive remote data from dozens of real time, low cost, low energy, probes measuring everything from individual farm livestock data and soil health to water quality and quantity data in all streams and tributaries. The probes will transmit data through LoRaWAN technology that accepts data over a 10km range collated on a centralised virtual hub. This innovative application covers the in-river water quality and quantity sensor elements whereas the farm sensors are covered by a Duchy College Agri-tech farm productivity project.

This will serve as a platform for the partnership to market this service to farmers across the region as a way of collating both agri-business resource protection information but also collate sufficient collective river data at a sufficiently high density so the Trust can market more nuanced management of abstraction and discharge business interests on the river, target problem catchments as well as monitor change related to future environmental management projects for flood risk, water quality improvements and drought resilience.

The data would be displayed on an online hub showing sensor location and live data feeds, where data can be accessed and analysed allowing for live decision making and alerts, forecasting and identifying issues and framing future non-produce environmental payments. This will be a crucial step in meeting the catchment scale data needs under the current Water Framework Directive and the Floods Directive and will be vital in leading the way in a post Brexit policy landscape on how to balance the need for food alongside other goods and services without the need for human centred monitoring.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE CHORAL HUB LTD	Innovative Digital Singing Education	£102,662	£99,582

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

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### Project description - provided by applicants

Choral Hub aims to build a gamified education app for singers (or aspiring singers!) in choirs. It addresses a major gap in the market by facilitating the learning of new music, the development of new skills and the creation of deeper connections between singers working on the same pieces of music. Choral Hub believes that music education should be universally affordable and accessible for all. It will help to mitigate the impact of the social distancing requirements resulting from COVID-19 as well as the impact of recent large budget cuts to the arts, by offering an AI-powered tech solution to bring music provision into more homes, mitigate persistent skill and confidence-based barriers to entry within choral music and encourage more people to get involved with the joys of choirs.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
GB SHARED LTD	The Gen	£67,646	£67,646

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 are critical to the success of the UK and globally. The opportunities for young people to access are endless. Despite such an offering, it is still incredibly difficult for young people to find what they need to succeed.

The Gen is a national youth platform which is populated with information, advice, support and opportunities for young people aged 14-24 which ensures equal access to information and opportunities for all young people.

We do not replicate any existing product or service, we simply bring them all together and categorise them for ease of access. We further promote, monitor and measure the volume of opportunities being shared and accessed to provide a real time view of what young people are looking for to enable faster response times on the needs of young people.

Our internal measuring mechanisms allow us to report on the impact of sharing at ground level.

This national platform will be abundant with information willingly shared by our business and education communities. From finding jobs, career advice, funding, entrepreneurship, internships, life skills, support, accommodation and much more, The Gen will equip young people with a window into their potential futures, allowing them to access any support they need and to make more informed life and career choices.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
FRUIT BOWL LTD	ANGO Alpha Development	£98,872	£98,872

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

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## Project description - provided by applicants

Ango will build a software application for construction businesses that helps them achieve discounts on purchases from partnered suppliers and more affordable access to greener, higher-quality products and materials. Ango will achieve this by aggregating online demand from independent buyers in real-time to attain and apply discounts from suppliers. We will use artificial intelligence, statistical modelling and real-time price testing to optimise purchasing. This will boost construction businesses post-COVID-19 by providing a way to reduce purchasing prices while cash flow is constrained, and increase total project values and contract bidding opportunities by supporting the use of higher-quality, greener products/materials in builds. The software application will be completely free to download and use to make discounted purchases from partnered suppliers. The project will also benefit online demand for partnered suppliers at a time their demand has fallen too, lower shopping basket churn rates (percentage of buyers who abandon online baskets before purchasing) and provide free marketing from user product searches.

Ango's technological innovation can be expanded beyond construction to further industries in the future, supporting the UK's transition to digitisation, becoming an AI/data-driven economy, and achieving circular economy and climate change targets.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LIFETIME MORTGAGE ANALYTICS LIMITED	An AI-Enabled, Database Tool for Insight-Driven Residential Mortgage Investment Analytics	£99,880	£99,880

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

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## Project description - provided by applicants

Founded by Simon Potter and Olivier Defaux, LTMA is a rapidly growing SME that intends to address the challenges posed by the significant use of outdated spreadsheet approaches among current (global) investors in residential mortgages. Offering backgrounds in entrepreneurship and senior investment banking with systems experience, the founders of this project intend to develop a technology-led solution using AI, that could reduce unnecessary human resources and allow the loan investor to receive valuable data insight.

It is also expected that AI could be used to identify errors in data sets (whether primary data or calculated) and improve data quality.

It is anticipated that this innovation could also help to address the portfolio damage, uncertainty, and resource shortages inflicted by the COVID-19 pandemic.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DNA.AM LIMITED	ASPIRE – Aerospace Special Processes Intelligence and Re-skilling of Employees	£99,727	£99,727

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

ASPIRE project innovation focuses on responding to the sustainable productivity need of aerospace special-process houses through the integration and piloting of our MVP vision intelligence application with our AeroDNA production-control solution. The combined solution will deliver the capability to extract real-time data on human performance to:

- \* digitise human action from skilled special-process operators to provide automated time, motion and error capture data
- \* alert operators about special-process defects and non-compliance vs. standardised process routes captured in AeroDNA so they can be remedied immediately
- \* extract and segment video of human actions on the special-process house shop-floor to retain best-practice through digitalised knowledge transfer.
- \* remote access to visualise special-process operations in real-time by distributed process engineering teams
- \* capture unprecedented business intelligence about special-process human operations which will feed into the AeroDNA scheduling solution to optimise electroplating vats and heat treatment oven utilisation which significantly impacts energy consumption and sustainability.

The approach leverages state-of-the-art AI computer vision to recognise operator actions on special processes to ensure that stringent aerospace quality standards are met. The use of convolutional neural networks offers more generalisability for pattern recognition and performs better for detecting anomalies compared to traditional automated optical inspection. A digital record of the actions that have been performed on a product can then be stored as a proof of quality management as well as be used to train new special-process operators. This record is useful for digitally connecting factories so that defects can be traced through supply-chains and used to prove quality standards.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
INTEGRATED GEOCHEMICAL INTERPRETATION LIMITED	Towards digital solutions for the Net-Zero UK North Sea energy hub: The digital Emissions Atlas prototype	£96,439	£96,439

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 severely affected oil and gas exploration and production in the North Sea and highlighted the importance of accelerating the transition to net-zero emissions energy, a key to achieving the UK's 2050 climate targets. The primary motivation for this project is the recognition that the UK energy industry must focus on the transition from oil and gas to carbon-free production.

In this project, we propose to develop a digital North Sea Emissions Atlas to support the decarbonisation of the UK energy sector and contribute to the emergence of the connected UK Digital North Sea. The focus of our innovation is the prototype of the Emissions Atlas, a flexible emissions monitoring database feeding a geospatial portal, created for a major UK North Sea net-zero emissions energy hub.

The Emissions Atlas will enable the cost-effective monitoring of greenhouse gas emissions associated with:

- \\* oil and gas production for domestic needs during the energy transition;
- \\* decommissioning/abandonment of oil and gas infrastructure;
- \\* production of natural gas (mainly methane) for blue hydrogen fuel generation;
- \\* carbon capture and storage in the subsurface, in synergy or not with blue hydrogen production.

The Emissions Atlas will be based on open data from academia and industry. Within the project, we will research and develop innovative techniques to support the scalable data management of the complex data types required for monitoring greenhouse gas emissions, compile an extensive database, and develop modelling methods to obtain flux estimates from the data using physics-based models.

The deliverables of the Emissions Atlas prototype include a demonstrator product to serve as basis for the short-term development of a fully commercial product. We anticipate the Emissions Atlas will help establish IGI in the carbon-free energy market by increasing the range of specialist consultancy and software products it provides. This project will thus contribute to placing IGI in a strong position to support the energy transition in the UK, and ultimately globally. This project is expected to have a positive climate impact for the UK by helping it reach the 2050 net-zero emissions target. The prototype will, on the medium-term, be extended to have the capacity to support the future UK decarbonisation industry. IGI will promote Equality, Diversity and Inclusion, involving women in more than half of the project roles, including management and R&D.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RECRUITMENT SMART TECHNOLOGIES LTD	An AI recruitment platform that will move a minimum of 100,000 candidates into appropriate employment every year, yielding an expected year-5 post-project return of £10M.	£96,298	£96,298

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

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

Project description - provided by applicants

Recruitment Smart is a UK-based SME developing AI products for the recruitment sector. It has identified an unmet need that is likely to arise from the expected surge in jobseekers in the UK, along with potentially prohibitive hiring costs to employers, as a result of COVID-19. It proposes to develop an AI-based recruitment platform that will bring existing and prospective employers and COVID-19 impacted employees/jobseekers together in one place. In doing so, it aims to streamline hiring systems and reduce costs for employers.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Innovation to Detect Contamination in Natural Gas	£99,967	£99,967

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 new camera-based system is being developed to provide gas network managers and gas treatment process controllers with a sensitive alarm system for contamination events. This project builds on the success of our initial product LineVu to improve ease of installation, give a better FOV, and increase the operating temperature range.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Spiratronics	Optimised order-fulfilment for online micro-businesses post Covid-19	£76,016	£76,016

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

Whilst Coronavirus has had a massively negative impact on large parts of the economy, it has also driven huge growth in other areas. One such area is that of Internet Mail Order where Lockdown increased UK mail-order parcel volumes by 26% virtually overnight. Much of that growth was driven by micro-sellers who were uniquely able to adapt and continue to trade when larger businesses couldn't. At the same time, thousands of new, small online selling businesses were formed, often by people working from home and looking to replace income lost to the Pandemic. In just one month (May 2020), eBay, reported that a staggering 50,000 new small, independent retailers, joined their site in the UK alone.

For the last few years, we have been developing computer hardware/software systems and business processes which are designed to improve the efficiency and accuracy of order picking and packing tasks in distribution (particularly multi-channel e-commerce) businesses.

The concept of our innovation is to take the distribution industry picking and packing best-practices which we have developed, and package them in such a way as to be able to deliver their benefits to micro-sellers who have emerged/grown through the Covid Pandemic whilst completely removing their inherent implementation and management complexities.

Not all of the processes we have developed are new, but what characterises them is that exclusively, they are all currently only commercially available as part of large, very expensive warehousing management systems which are out of reach of SMEs and Micro-businesses.

This project focuses on making our proven systems which enable these processes, available in the form of an off-the-shelf hardware and software package, The solution will be modular and totally scalable in terms of function and capacity and easily installed and maintained by even the smallest of online selling businesses enabling them to achieve results in Key Performance Indicators which are currently enjoyed only by large, resource-rich businesses employing highly expensive bespoke systems. These KPIs include:

- \* Order fulfilment times / costs
- \* Picking errors and resulting returns rates
- \* Customer disputes and resulting refund/reship rates
- \* On-time dispatch & delivery, value-added and resulting customer satisfaction and repeat business metrics
- \* Improved flexibility allowing fragmented and efficient product storage location which in-turn reduce cost and environmental impact

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

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Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Critical Communications Ltd	Call-4-Help — Development of the Call-4-Help mobile app which ensures hospital staff can find the resources they need quickly, easily and securely	£99,292	£96,313

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

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

## Project description - provided by applicants

Call-4-Help is a secure mobile app for efficient communication and structured task management within hospitals. The product enables nurses, doctors and supporting staff to provide and coordinate care for their patients round-the-clock. The app is needed in the context of the recovery from the coronavirus pandemic, with hospitals facing an unprecedented backlog of procedures, operations and other healthcare needs. Hospitals require a step change in efficiency and models of care delivery. Call-4-Help has been developed to boost clinical productivity, improve patient outcomes, avoid preventable harms and reduce costs, enabling more patients to be cared for by the NHS over time with the same money.

The product will be unique amongst clinical communications platforms, being initially deployed in response to the sudden increase in workload during the COVID-19 surge at an NHS pilot Intensive Care Unit. During this period, the prototype app helped with specific challenges such as staff skill-base, care coordination across COVID-19 segregated areas and the need to communicate while wearing Personal Protective Equipment (PPE). Going forward, hospital staff will encounter similar and distinct challenges in providing safe and efficient care for patients who may have been waiting many months for treatment. As hospitals adjust to the 'new normal' while resuming the breadth of clinical services, including for vulnerable people in the context of ongoing infection risks, this project will obtain clinical and operational feedback to refine the tool for these needs, while preparing for integration with new hospitals' workflows.

The transformational innovation of Call-4-Help is that group chats or paper lists are replaced by a system of structured task queues designed for hospital or speciality environments, with a simple unified interface usable while wearing PPE such as gloves, respirator and visor. It also helps to stop waste of PPE by reducing the number of transitions staff make in and out of protected areas.

Care or ancillary tasks are actioned in a cooperative way. Staff enter new requests using the mobile interface, and are notified of relevant task requests entered by others, allowing individuals to see all the tasks in their groups. Tasks are claimed or assigned to relevant staff who then securely exchange information privately via text, videos, photos and audio. The responder completes the request or unclaims it if they can no longer support it, sending it back to the collaborative pool.

The app will replace outdated and insecure practices of paper-based task lists, paging or 'bleeping' and inappropriate use of social messaging platforms containing patient-identifiable data. The product will be compliant to NHS information governance frameworks, interface with existing IT systems and provide an evidence trail of communication. For ward and hospital managers, the product will provide dashboard tools to enable analysis of workflow bottlenecks and frequently recurring issues.

Collaborative development of the app aligned to the needs of its customers will result in demonstrable, measurable improvement in care coordination, securing the product's place in an expanding UK market and current NHS procurement initiatives, with future attention directed towards international healthcare contexts facing similar challenges.

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PLANT ECOLOGY BEYOND LAND (PEBL) CIC	PEBL-Hatch: Modular, semi-automated high-value seaweed seed production system	£89,681	£59,839

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

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

## Project description - provided by applicants

PEBL-Hatch aims to design and implement a modular, semi-automated seaweed seed production system that aims to incubate high-quality seaweed seed materials for marine aquaculture businesses across the UK.

Social distancing measures and travel restrictions have meant the UK's single seaweed seed production facility is unable to deliver its services [\[https://www.sams.ac.uk/about/covid-19/\]](https://www.sams.ac.uk/about/covid-19/)

In addition, demand for health products relating to seaweed sourced from Europe has seen up to triple-digit growth [\[foodnavigator.com, May 2020\]](https://www.foodnavigator.com) due to increased attention on health credentials, provenance, transparency and food packaging as a response to COVID-19. Lack of UK-produced supply has forced customers to buying from abroad (raising bio-security complications).

Additional opportunity: Evidence highlights the potential of seaweed as an effective immunotherapy against coronavirus [\[Dordick, Nature Comms., July 2020\]](https://www.nature.com/articles/d41586-020-00000-0).

This system will improve on existing facilities;

1\. Facilities are optimised for culturing high-value seaweed seeds focusing on immunity-boosting food applications 2\. Through a modular, low-impact, semi-automated design that reduces operational cost, energy usage and environmental footprint whilst allowing for social distancing

This project translates sensor and automation technologies (specific to water quality measurement and control) to a new aquaculture protocol in view of creating a commercially viable seaweed seed production operation.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SIMPLE CYBER LIFE LTD	Solution Architecture R&D of Online Safety Automation	£94,917	£94,917

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

Develop a world-leading online protection automation, revolutionising how consumers protect themselves online, ultimately saving lives.

COVID-19 lock-down measures have drastically increased global digital connectivity and cyber crime targeting consumers has sky-rocketed (Interpol, 2020) as parents work from home, children are schooled remotely and families seek more online based entertainment. 73% of teens have been cyber bullied and victims are more than twice as likely to self-harm or have suicidal thoughts.

This COVID-19 induced increase in online threats against families is being further amplified by a phenomena called 'security fatigue'. 76% of consumers are aware of the risks of cyber crime (Consumer Cybersecurity Trends Report, 2018) but haven't been able to implement any protection as they're paralysed by the complexity of it all.

The consumer online safety market is focused on producing 'point solutions', e.g. more intelligent parental control. These by their very nature, provide an incomplete solution to the variety of attacks being subjected to consumers online.

Instead of creating yet another point solution, we've prototyped a disruptive web platform that acts as an aggregator, designed to make the implementation of existing protective technology much easier.

This grant enables research and development on the design and architecture required to finalise the last unfinished component of our online platform - developing an innovative automation that makes the implementation of existing online safety technologies easier for users.

We will use this grant to build further on the momentum gained from being selected for the O2 / Telefonica NCSC (National Cyber Security Centre) Cyber Accelerator programme, driving forward to develop a revolutionary online safety solution for consumers.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
LAIWA COMMUNICATION LTD	Optical Meter Reader for connected utility and sub-meter reading	£97,736	£97,736

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 METERING

Smart metering is a technology implemented on energy distribution on a worldwide scale driven by new regulations, needs for improved efficiency in energy grids and customer demand for improved billing and feedback. Even though the smart meter rollout is driven by incentives and legislation in countries like the U.K. and parts of EU, it lags on the time plans. It has also met resistance, mostly due to high costs and low motivation to change the meters by the end-users.

### SLOW AND COSTLY PROGRESS

Large sums of money are invested with quite slow results in the meter rollout. For countries with less access to capital, it is a difficult task to roll out expensive smart meter systems.

### REDUCTION OF GREENHOUSE GASES

Smart metering is often mentioned as an example of an ICT solution with the potential to reduce greenhouse gas (GHG) emissions.

A large part of the meter readings is done manually by meter readers. Visiting various residential homes, buildings, and other premises is a risk of both catching and spreading the COVID-19 infection.

### OPTICAL SMART METERING

Laiwa Optical Meter reading is a solution where an optical meter reader is attached to the front of the utility meter, it reads the meter display, converts the numbers to digital values that transmit through the smart meter or mobile communication networks. By doing so, a virtual smart meter is created that fulfils the requirements of the SMETS smart metering standard.

### VIRTUAL SMART METERS

By using the smart optical meter reader with existing, well working, electromechanical meters, "virtual smart meters", the smart meter technology can be implemented at a much lower cost than a full smart meter rollout.

### COST SAVING

The installation of the optical readers is much easier than installing a complete smart meter and achieves significant cost savings through keeping the existing meter infrastructure with residing investment value transforming them to virtual smart meters.

Note: you can see all Innovate UK-funded projects 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 system is a solution to making legacy meters smart at a minimal cost and no intrusion on the meter.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MAGNITUDE INNOVATIONS LTD	Predictive Performance Analytics Solution for Additive Layer Manufacturing	£129,834	£99,972

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

Magnitude is an Additive Layer Manufacturing (ALM) solution development firm. We specialize in Additive Layer Manufacturing (commonly known as 3D printing) process improvements and use of Metal Laser-Powder Bed Fusion (L-PBF) technology in industrial applications.

The Metal ALM process is inherently characterized by production efficiency losses that largely affect internal costs and thus ALM manufacturers' profitability. To overcome these efficiency problems, Operational excellence is widely used in traditional manufacturing, but never in ALM due to the process complexity and constant evolution of production processes. In our industry, no other player has yet figured out a way to apply Operational Excellence principles and metrics to Additive in a viable way, until now.

At Magnitude, we created **industry-specific algorithms to accurately assess the performance of Metal ALM systems** and allow manufacturers to visualize and act upon every single inefficiency affecting the production process. The result of this innovation is our core product concept, Uptimo, a predictive performance analytics **software that improves the performance of Metal ALM systems and significantly reduces the costs of production**, finally making Metal ALM businesses financially sustainable.

Uptimo's innovation lies in its unique set of algorithms that, thanks to the team's superior knowledge and experience in the industry, are tailored to the complexity of Metal ALM production as well as machine agnostic, and adaptable to the specific operational workflow of every manufacturer.

Uptimo is currently used to analyse Metal ALM manufacturer's historical production performance and make improvements on individual jobs within the larger scope of production. **This project will be dedicated to the development and customer validation of predictive performance algorithms**, to make its use in every ALM production facility a requirement in order to stay competitive, **enhancing our business capabilities** from supporting customers in production analysis **to being an integral part of their production decision-making process**.

At the moment, Uptimo analyses an organization's production data and provides instant feedback on the efficiency of equipment and operations. **With the development of predictive performance analytics**, the software will help manufacturers make informed decisions on day-to-day actions, as well as any aspect of the process that impacts **the final product costs and quality** without any prior process knowledge.

Furthermore, Uptimo shows the true efficiency of every job and the minimum price manufacturers should be charging for it. By eliminating mistakes and production wastes, Uptimo helps in training the organization towards reaching sustainable performance and optimizing capacity on existing systems, increasing ALM profitability and saving on capital investments.

The Uptimo software was first conceived in 2018, it has passed the initial feasibility study phase and is currently a full functioning beta version. The Uptimo beta has already received a lot of attention from multiple ALM manufacturers in the UK, Europe, and North America. The goal of the project is to develop new software features and bring it to market by next year.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
JAMES WALKER & CO. LIMITED	LOW COST MANUFACTURING PROCESS FOR LARGE DIAMETER WIND TURBINE SEALS	£72,969	£72,969

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 wind energy generation industry is predicated to grow significantly over the next 10 years. Turbines need to increase in both size and efficiency, with turbines under development now having shaft sizes greater than 6m in diameter. Rotary shaft seals are needed to seal lubricant or grease inside the main shaft bearing. Operators are seeking longer service life for the turbine and components, with a technical challenge for larger seals as these need to withstand higher surface speeds as shaft size increases.

Current state of art technology for rotary turbine seals is to manufacture compression moulded elastomer profiles seals. These seals normally have a combination of high performance elastomer, lip spring and back reinforcement. Several donor seals are compression moulded, split and re-joined to form larger diameter seals. The size of the donor seals are limited to heated platen size used in the moulding operation.

The technology used to join the donor seals into the finished seal is a proven technology but any join is subject to increase risk of failure and detrimental impact on service life.

This project aims to take James Walkers existing seal design and materials and radically change the manufacturing process such that turbine seals of any diameter can be manufactured with only a single join.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
nocomoto	Innovative, low cost ultra-low emission urban vehicle for business and personal use	£74,000	£74,000

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

A six-month project to accelerate an existing R&D programme to develop an innovative, ultra-low emission vehicle. Project outputs will create an investment-ready proposition to attract short term and equity investment and start production and sales. The project will reduce overall programme timescales by approximately 12 months and overall investment requirements and risks will be reduced.

This unique human-electric hybrid vehicle is aimed at two distinct markets, both directly relevant for COVID-19 recovery. Both businesses and individuals urgently need to cut their costs - including for transport. This is driving business demand for "cargo-bikes" for sole-traders and mobile workers. Individuals and households are buying more bicycles and electric-assisted cycles ("e-bikes").

Policies and infrastructure investment designed to cut urban transport carbon emissions and air pollution are also driving demand for Low Emission Vehicles, displacing cars and vans. COVID-19 has discouraged use of public transport, amplifying demand for bicycles and e-bikes. Also, cities are introducing "low-traffic neighbourhoods" (LTN) where cars and vans are banned or discouraged.

Large scale modal shift to human-electric hybrid vehicles is limited by design weaknesses dating back over 100 years. The features and benefits of the new vehicle overcome the key obstacles to cycling as a viable alternative to conventional small vans and cars for day-to-day urban transport. These benefits are applicable in any urban setting in the UK and elsewhere. The concept therefore has substantial growth and export potential, which will help support "green recovery" in the UK manufacturing sector.

Most project work will be carried out by specialist sub-contractors appointed via competitive tender. External expertise and capacity will be bought in to support design for production, IP management, e-commerce, market testing and prototype manufacture.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CIRCULARITI LTD	A Circular Market Solution That Streamlines Fashion Industry Information Into One Easy-To-Use Platform, Predicted To Save the EU £600B	£99,988	£99,988

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

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## Project description - provided by applicants

Circulariti Ltd. is an SME that was founded by Jas Sandhu and Jamie Goldring. During COVID-19, the fashion industry experienced reduced revenues, decreased customer spending and confidence. The current infrastructure in this market is often outdated and offers inefficient services. Circulariti aims to resolve this issue with the circular economy by developing a start-to-finish platform that will integrate information about products, systems, procedures, and customers into a single platform. This will aid in increasing revenues and improving the accessibility to services.

### **\*\*Scope\*\***

### **\*\*Summary\*\***

Existing solutions in the market only offer a single-view of either a product, manufacturing process, or other related activities in the supply chain. However, Circulariti will provide a comprehensive 'full' picture to its customers by combining the different features of the ecosystem into a single commercial platform.

### **\*\*Innovation and EDI Considerations\*\***

Circulariti will launch and host the entire end-to-end experience for the circular economy:

#### \* Buy

1\ Materials: Designing the removal of waste, buying certified eco-materials from the company's global marketplace and enabling the micro-economy to trade and support products' generation with positive attributes.

2\ Production: Existing production and manufacturing partners from Tier1-3 suppliers will be mapped to footprint-waste, while they will also have the option to procure new ethical suppliers and track productive outputs and logistics.

-Sell 3\ B2B: A marketplace for excess inventory, to monetise off-season stock and invest in circular projects.

4\ B2C: Inject retail/e-commerce channels with traceability, transparency, and a 5-star green rating system.

Subsequently, consumers will be able to 'talk to their clothes' via Circulariti's app.

There are no identified potential or inadvertent racial/ethnic/gender biases within this proposal that could negatively affect one gender or ethnic group. On the other hand, Circularity is encouraging wealth for secondary and tertiary markets who use its application.

### **\*\*Market Opportunity and Sustainability\*\***

Circulariti shows the 'entire picture', while the competition offers a 'mosaic' picture.

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

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

By unifying all data, systems, processes, and users with ecosystems of partners, the company acts as a record system for all products during their entire lifecycles.

The entire innovation will reimagine sustainability, from material analysis of carbon/water/energy footprints to ethical production, removing waste, and facilitating recycling.

The annual global addressable/serviceable and the UK's addressable/serviceable markets are £4-000T/£1-000T and £66B/£10B respectively with CAGR: 27.1% (Statista 2020).

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CREATE TECHNOLOGIES LIMITED	Haptic Master	£98,034	£98,034

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

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

Project description - provided by applicants

Haptic Master will develop a human-scale haptic interface to enable remote teleoperation of master-slave-manipulator devices. This will enable some of the UK's key infrastructure, especially nuclear plants, to be modified to enable remote operation to protect them against the impact of future lockdowns. It will also provide a mature technology that can be used to add teleoperation to other industries giving them viable options to adapt to reduce dependence on physically present workers, by enabling workers to control complex machinery and perform delicate, skilled tasks at a distance.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RESEARCH GRID LTD	New machine learning tool to improve public and patient involvement and engagement	£70,520	£70,520

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 statutory policy commitments to patient and public involvement and shared decision making in health systems abandon the "nothing about us without us" mantra.

As a result of Covid-19, clinical research institutions, businesses, and industry have either halted patient and public involvement and engagement in research design entirely, or tried to address PPIE in research in a manual and inefficient way which limits the speed, accessibility, quantification and adoption of a new way of doing patient and public involvement and engagement (PPIE) in business.

'Inclusive' is a Patient and Public Engagement Management System which incorporates machine learning and AI to streamline slow, manual administrative workflows with innovative tools such as AI-built directories of potential collaborators and automated document creation and population. The platform will provide medical research institutions with greater access to diverse patients, community groups and businesses as well as digital tools to support Covid-safe and environmentally friendly methods of PPIE management.

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

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



## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IDEFIGO LIMITED	Smart Cross-Infection Risk Profiling using Intelligent IOT Camera Technologies	£94,560	£94,560

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

This project by iDefigo, is in response to the current pandemic and will take a range of measures to identify and reduce the risks of cross-infection in places of work, and anywhere large numbers of people are legally gathering. The objective of the project is to support getting the economy back to work.

This project aims to help minimise the risks of cross-infection by identifying, tracking and reporting:

- \* wearing a face-mask within indoor public places,
- \* social distancing,
- \* limiting group sizes,
- \* managing the number of people inside a building,
- \* detecting elevated body temperature.

The aim of this project is to use Camera technology to identify each of these factors, provide the resulting non-compliance data, securely over the mobile internet-of-things network, to iDefigo's Cloud Hosted platform where the data can be processed and reported on in near real time, enabling the clients of this service to track and identify trends in one or a combination of these risk factors. This will enable users of the system to be able to see issues unfolding in specific sites, variance between sites and correlate across the range of risk factors, ensuring that the right response is put in place as soon as the problem occurs.

This project delivers a non-invasive approach to identifying these risk factors. Currently, any solutions in place to track Elevated Body Temperature, or Face Mask wearing are aimed at individual compliance and require near-immediate intervention typically by a member of staff. This project anonymises the data, factors out acceptable non-compliance and reports across a data set showing the overall problem and allowing the users of the system for the first time to be empowered to deal with the resulting issues in an appropriate and proportionate manner.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ETIVE TECHNOLOGIES LIMITED	Housing Market Recovery supporting Digital Transactions	£97,295	£97,295

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

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

## Project description - provided by applicants

Results from a MHCLG 2018 report highlights that more than 300,000 property transactions collapse every year due to broken chains and buyers changing their mind, costing affected sellers on average £2.7K with a total cost to the market of £400 million. The 2018 MHCLG Call for Evidence sought input from the sector which is part of a wide-ranging body of work government is undertaking to improve the housing sector. The Government's overarching view being that the home buying and selling process in England & Wales is not fit for purpose, as a quarter of house sales fall through each year.

Combined with failed property transactions are issues and barriers to supporting the recovery of the housing market. The Government recently introduced reduced rates of Stamp Duty Land Tax (SDLT) which applies to residential properties purchased between 8 July 2020 until 31 March 2021 inclusive. Due to social distancing, continued restrictions on the number of staff being able to work within offices, both together and to meet with clients, this is causing undue delays and friction into the home buying and selling process for solicitors and conveyancers. Digital identity fraud has increased since March 2020, when Covid19 lock downs were introduced, as more solicitors work from home without the security standards and digital identity checking capabilities in place.

The government is committed to enabling a digital identity system fit for the UK's growing digital economy. "It is clear that there is a need and an expectation for the government to make it easier for people to use digital identities quickly, safely and securely and we are committed to enabling this." Cabinet Office Minister Julia Lopez 1/9/20\.

This project will seek to determine and agreed digital identity standards for the home buying and selling process for a client seeking to sell their property and linking that person/identity to a home that they are selling/buying. This is the crux of the problem for the legal sector, as well as tackling fraud for mortgage lenders. Putting the customer at the centre of the process and standardising and creating portability of the identity verification of the parties to reduce the risk of identity and property fraud and money laundering will be one of the many outputs from this project.

This project is looking to address some of the issues around the house buying and selling process around land and property information, connecting a customer to a property and verifying the identity of both buyer and seller to an assured identity standard. Further enquiry will include:

- o The need for a mechanism to share information to speed up the home buying and selling process built around supporting greater digital transactions.
- o The need to have privacy and consent at the centre
- o A digital identity trust framework supporting the home buying and selling process
- o Make is easier for people to prove their identity online so transactions quicken
- o How to build trust into the system and trust in the information as well as reliance

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 & FUTURE TECHNOLOGIES LIMITED	ARRROWS	£99,996	£99,996

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

ARRROWS, we believe, is a first.

ARRROWS takes the best in road based route planning and combines this with optimised drone route planning to provide a multi-modal transport optimisation system designed to load balance the testing of COVID-19 samples across a target NHS Trust.

Currently within our NHS partner COVID-19 samples are sent for testing at a range of Pathology Labs across their geographic region, serving a population of 750,000 patients and over 250 GP practices.

During the recent COVID-19 pandemic, all tests across the NHS Trust area have been sent to a main local hospital for analysis. This has swamped the pathology lab there and as such non-COVID-19 samples have been sent back to another local commercial pathology lab to load balance the pathology services across the trust.

This has led to a significant increase in the amount of road transportation used to send samples from one lab to the other.

To maintain the testing throughput has meant that this exchange of samples has led to some less than ideal situations resulting from laboratory operating times and courier availability. If a sample arrives at 4.59pm and makes the last courier, it will arrive for testing at the correct lab within 45 minutes. If it arrives at 5.01pm and the last courier has already left it must wait until 9.01am the next morning before it can be dispatched to the correct lab, adding an additional 16 hours before arriving at the right lab for testing.

Working with our NHS drone flight partners, we have obtained Civil Aviation Authority permission to fly 3m wingspan drones between the pathology labs and by the time of this application's assessment we should be flying up to 6 round trip flights a day carrying 6kg of samples. The distance between the two main pathology labs is 20.2 miles taking 39 minutes each trip.

Using the drones to fly the samples between labs saves 240 miles of road transportation a day, or 89.31Kg of CO2 per day; this then extrapolates up to 36.2 tonnes of CO2 annually. Using drones charged from solar has meant we have reduced the operational carbon footprint to zero. We are working with the trust to optimise COVID-19 testing across all of the trusts geographic area. We have identified an initial 10 further locations where we can operate drones from (according to the CAA's current risk appetite) but we need to undertake ARRROWS to work out the routing and optimisation to blend drone and courier transport to maximum effect and carbon reduction.

We will use machine learning algorithms and monte-carlo simulations to calculate the optimal routing for both land/air journeys enabling us to create the optimal strategy for COVID-19 pathology processing with the lowest CO2 emissions practically achievable.

This is innovative, as for the first time we are combining established land optimisation algorithms with our own drone routing operations, with the overarching aim of load balancing COVID-19 testing prior to the second wave, whilst reducing the carbon footprint as much as possible

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VISTALWORKS LIMITED	FinTech digital solution to prevent online payments to criminal traders	£99,999	£99,999

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

Governments and regulators set the rules of engagement for economic growth, environmental protection and funding of public services. Law enforcement agencies & the legal system ensures compliance.

The majority of good, legitimate businesses follow these rules. They assume their share of responsibility for employees and social impacts, and pay associated costs and taxes. They make considerable investment into innovation, IP protection and regulatory compliance. This drives growth, which in turn funds public services and wider economic competitiveness.

Criminal sellers and illicit traders do not follow the rules. They do not ensure product safety or legality, and do not pay tax, actual or social costs. They steal or negate the R&D investments of legitimate businesses, and undermine progress towards sustainability and economic. The revenues from illicit trade fund other criminal activities, rather than social good.

This is not a fair fight, and legitimate businesses, citizens, communities and economies are the losers. The winners are organised criminal gangs -- illicit trade is the biggest funding source of organised crime (Source: UN, Europol, UK Police). And crime has moved online during COVID-19, using mainstream delivery services and ecommerce platforms, making it harder to detect and intercept. The UK's National Crime Agency and Europol have documented an increase in cybercrime, online criminal selling, fraud and illicit trading of counterfeit goods directly linked to those exploiting the chaos of the Covid-19 crisis.

For post-COVID business recovery to be fair and sustainable, it is important that criminal sellers and illicit traders are detected and their unfair advantage over legitimate businesses is stopped.

Vistalworks are experts in online illicit trade detection. We've built an AI system to reduce consumer demand for illicitly traded goods and provide intelligence to better focus law enforcement resources (used by HMRC, Police Scotland, and Trading Standards Scotland).

This project brings a new capability to the business with global market potential, evolving our proposition from advisory to preventative, and introducing a completely new prototype technology that enables banks to block online payments to criminal sellers, and prevent the highest-risk transactions before they occur. This will reduce fraud, illegal financial flows and the associated service, refunds and chargeback costs.

We'll achieve this by focusing on criminal sellers at the point of online transaction, warning payments providers and payments processors so that they can block, investigate or decline high risk transactions.

Vistalworks has the potential to fuel sustainable economic recovery at a nationally and globally significant level, by reducing the 2019 \$2.2trillion annual economic losses from illicit trade by up to £10billion per year and curbing the significant levels of climate-related emissions and pollution associated with black market sellers.

When COP 26 comes to our home city of Glasgow in 2021, it is our ambition to present a solution that can be used by the world to tackle illicit trade and directly reduce the associated economic, social and environmental harms.

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TGMATRIX LIMITED	Development of an Intelligent Technology Platform to Optimise Refrigerated Food Delivery Efficiency by Utilising Excess Vehicle Capacity Across Multiple Distributors, thus Reducing Congestion and Emissions (Matrix Reloaded)	£99,156	£99,156

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

TGMatrix is a rapidly growing UK-SME specialising in urban living. The founders have a significant combined experience in commercial food delivery and regulatory requirements. The company hopes to improve the traffic congestion and vehicle emissions inherent in food delivery by developing an advanced software solution aimed to improve food delivery management and collaboration.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CLEARSKY LOGIC LIMITED	An Innovative, Automated, Machine Learning Appointment, Logistics and Communication Platform for Mobile Service Provider SMEs that can incorporate	£99,848	£99,848

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

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

## Project description - provided by applicants

ClearSky Logic Ltd. is a UK-based SME founded by Darren Auld and Phil Telfer. Currently, UK-based SMEs are facing the challenge of providing effective appointment booking platforms to their customers, especially when appointments are in disparate locations and travel-times need to be factored in. There is currently no smart, automated, ML-enabled digital platform that allows appointments to be booked whilst taking travel times between appointments into account to allow the most effective scheduling. Following the COVID-19 associated recession, and the consequent slump in B2B and B2C spending, it is now more important than ever for SMEs to be able to utilise their time effectively and efficiently. MyBookingHub will provide a digital communications platform to resolve this challenge and improve customer communication and appointment bookings. This will be an automated, internet-based, ML-enabled appointment platform that can be used for enhanced operations during the current COVID-19 pandemic.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MIKOTA LTD	Novel hemocyanin protein adjuvant for animal vaccine market.	£94,384	£94,384

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

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

Project description - provided by applicants

Mikota Ltd in collaboration with Cardiff University and Royal Veterinary College (University of London) are evaluating a new protein adjuvant as a vaccine delivery platform, primarily aimed at the companion and livestock market.

This project is building on Mikota's earlier hemocyanin work in creating novel constructs to address research demonstrating that companion animals and livestock may be potential asymptomatic COVID-19 carriers.

The outputs from this project will demonstrate the efficacy of Mikota's BioCyanin constructs as a vaccine adjuvant in a mouse model. This work will be expanded in future animal trials which are expected to lead to evidence for potential future use in human COVID-19 vaccines, or other coronavirus vaccines.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IMPACT RECYCLING LIMITED	BOSS2D - Novel Films Separation system and Recycling System	£99,912	£99,912

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 have developed a novel recycling system for waste films, allowing the separation of multi-layer and mono-layer film for recycling. This technology will tackle a variety of currently unrecyclable waste streams and allow recyclers and waste collectors to more effectively deal with the increase in PPE films waste generated as a result of CV19\.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WASE LIMITED	Remote Monitoring and Control of Electromethanogenic Reactors - Circular Waste to Energy	£99,999	£99,999

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

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## Project description - provided by applicants

Food & Beverage Manufacturers (FBM) is one of the UK's fastest-growing sectors in the UK. The industry has been significantly affected by COVID-19. Due to reduced sales have resulted from the forced closures of the on-trade such as restaurants, cafés and bars.

FBM generate significant volumes of organic waste and wastewater that is rich in organics. There is an opportunity to implement onsite circular waste treatment at FBM. The waste contains valuable chemical energy, water and nutrients that can be recovered with appropriate technologies. Treating waste onsite can reduce carbon emissions, lower operational expenditure (OPEX), create a sustainable supply of bioenergy and reduce water demands. However, current waste to energy solutions such as Anaerobic Digestion (AD) have a large footprint and slow treatment time of 20-30 days.

WASE is developing a novel approach to decentralised wastewater and organic waste treatment. We have developed a patent-pending electro-methanogenic technology to provide a circular approach to waste treatment with our AgriWASE system. AgriWASE allows Food & Beverage manufactures to generate energy-rich biogas (80% methane), recover water and nutrients that can be sold as fertilisers. AgriWASE is a modular, containerised solution that can treat 2 tonnes of organic waste a day.

Our patent-pending technology treats waste up to 10 times faster and generating 40% more energy than AD. The accelerated performance comes from our novel electrode technology that accelerates the breakdown of organics. The biogas from AgriWASE is energy-rich, increasing methane concentrations from 50-60% to 70-80%. AgriWASE has a low ROI (<3 Years) and provides multiple benefits over conventional AD including the reduced footprint and associated civil costs, the increased energy generation and higher waste removal rates.

Through developing a system that can remotely operate and control AgriWASE, WASE and their customers will be able to dramatically reduce site visits, helping the environment thought cut emissions and enabling both parties to more effectively social distance.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PET TECHNOLOGY LIMITED	DigiVet Phase 1	£99,950	£99,950

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

This project builds on the current MVP Felcana have to expand their product offering.

Felcana is a pet digital health technology company producing smart, digital solutions for pets. We track activity, sleep, distance, calories, eating and drinking. Our monitoring platform analyses patterns in this data over time, alerting owners to any unusual changes in behaviour and gives veterinarians the data to diagnose and monitor health problems more accurately.

Continued digital innovation is recognised as imperative to improve veterinary care and Felcana is continually developing products which will be at the global forefront of veterinary innovation.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MG PRICING CONSULTANCY LIMITED	Virtual value discovery tool for B2B sales	£99,867	£99,867

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 \$200B (USD billion) B2B Software-as-a-Service (SaaS) industry has been undergoing a transformation in its go-to-market toward value-based selling.

The market need for B2B SaaS companies to achieve value-based selling can be categorised as follows:

**\*\*External need for better customer engagement:\*\*** SaaS companies need tools that enable them to have value-based discussions with their customers to explore, collaborate and align on the business outcomes the technology will achieve

**\*\*Internal need for more scalable sales enablement:\*\*** Sales teams need to be properly enabled on how to have outcome-based discussions with their customers. SaaS executives need tools to roll out value-based messaging for their products to their customer-facing teams and to iteratively update and cascade this messaging.

Furthermore, COVID has disrupted the typical B2B SaaS sales process. Externally, pre-pandemic software selling was heavily reliant upon in-person sales meetings and events; internally, sales enablement was based on in-person trainings. Due to COVID-related travel restrictions and budgetary constraints, the software selling and enablement is now increasingly virtual.

mgpricing is aiming to solve for these needs by building the first virtually-led value discovery tool for B2B software companies. This collaborative tool will support value-oriented discussions between B2B salespeople and their customers and be scalable to hundreds of customer-facing representatives. Furthermore, mgpricing will offer a bundled consultancy package to ensure successful implementation and adoption of the value discovery tool.

mgpricing believes that technology works as an equaliser across an organisation. In its current state, the B2B SaaS industry is driven largely by a high-touch, in-person sales process that tends to favour sales representatives with pre-existing and oftentimes exclusionary networks. With its technology, mgpricing will empower all sales and customer-facing teams to have meaningful discussions with their customers, improving performance regardless of pre-existing networks and pedigrees. Furthermore, the shift to remote selling due to COVID travel restrictions will persist post-pandemic; this tool will address that on-going need, resulting in lower demand for business travel, which will have positive environmental consequences.

The four-phase plan for the launch of the value discovery tool is as follows: Phase 1 -- Q2 2020 -- Prototype development (complete), Phase 2 -- H2 2020 -- Product development and closed beta, Phase 3 -- Q1 2021 -- Public release to existing customers and Phase 4 -- Q2/Q3 2020 -- Public launch.

The injection of public funding would allow for the rapid development of the value discovery tool and would create local employment in the technology sector.

The grant would fund the UK-based development of the tool and the accelerated timelines for launch. From a taxpayer perspective, the grant would ensure development within the UK rather than offshore. Furthermore, the taxpayer would benefit from creating a more equitable society where sales representatives are less reliant upon traditional exclusionary networks to succeed and a more sustainable future for the SaaS industry where sales is led using virtual tools rather than in-person meetings and events.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SCRIBEASY LIMITED	Scribeasy Partners Analytics (Scribeasy P A)	£83,776	£83,776

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

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



## Project description - provided by applicants

**\*\*Need\*\*:** The UK's museums sector was closed during the Covid-19 Lockdown. It has been estimated that revenue losses to the sector will be in excess of £743M with the loss of 4,000 jobs (Oxford Economics, 2020) and although they have reopened, footfall still remains low, with the public, families with children in particular, visiting in comparatively low numbers.

**\*\*Solution\*\*:** Supported by the UK's Natural History Museum, the education technology company Scribeasy proposes the further development of a novel AI app platform -- with \_Scribeasy Participant Analysis\_ (Scribeasy-PA) dashboard to be used by museums to promote their collections to school aged children and their communities (the largest customer/visitor segment for this sector). The aim is to generate new revenue opportunities with (online app sales and subscriptions) for museums and increase traditional revenues by accelerating visitor footfall. Alongside helping the conduct of museum research in new ways.

Scribeasy-PA will segment the museum collections into interactive themes -- natural history (and associated topics such as biodiversity, evolution (dinosaurs, etc) providing online story writing experiences with HD and 3D digital collections. Wide audiences will be able to discover and re-imagine collections beyond the museum walls, and in new and personalised contexts. Thus promoting literacy and new interest in the museum's offer. For the first time in the UK museum sector, museum researchers will be able to collect and analyse data about what interests their customers/visitors (participants) specifically (including emotional responses to objects), enabling museums to tailor their exhibitions to optimise interest in 'visiting' them. This may be in terms of increased footfall into their buildings or remotely. This ensures that the 2,500 museums in the UK can create exhibitions, using the 200 million objects in their collections, to optimise their offers and maximise revenue/donations from participants to help their organisations to remain sustainable and protect and create jobs.

**\*\*Evidence underpinning Scribeasy-PA\*\*:** This project is in line with research carried out by the UK's Art Fund into the impact of the pandemic on the museum sector (Covid-19 impact, 2020). The research report highlights the need for museums to find new ways of reconnecting with their customers/visitors (including encouraging people back into their buildings), and to be more agile and adaptable in terms of opening up collections virtually to reach audiences using interactive online technology.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INTEGRALS POWER LIMITED	Future Battery (FutureBat)	£95,858	£95,858

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

Integrals Power Limited (IPL) has successfully developed an advanced 2D Carbon cathode material for LFP battery cells. IPL has developed a proof-of-concept battery cell capable of offering the highest charging and discharging rate, (80% of its overall capacity in 10 minutes), optimised energy density and improved safety level unlike any other on the market. IPL's battery cells will be integrated into battery packs to deliver the best solution to electric vehicle manufacturers, electric devised produces, electric scooters, end-users and public service providers to enable the large scale adoption of greener and cheaper transportation medium.

This project will be focusing on optimisation of IPL's current battery materials, ageing behavior and designing a scaled up battery cell(Pouch or Cylindrical) with superior features, specifically for EV and E-scooter sector. EV and Electric scooter mobility have witnessed an unprecedented demand after COVID-19 pandemic, as shared mobility and public transportation systems are no longer a safer option for urban travelling and commuting. This Eco-friendly alternative is critically battery dependent, and still struggling with adopting solutions capable of super-fast charging (currently the time needed is a few hours). This is particularly true for EV, which main reason preventing the large-scale adoption is the long time required for charging, that is still a great limitation in such a time-poverty condition for many citizens and workers.

The outcome of this project is to accelerate the development stages and pave the way for future joint business ventures between UK industry and other global battery management system manufacturers. This will contribute to job creation, climate change mitigation, and consequently an improved and reliable battery for many applications which can be useful in situations similar to COVID-19 pandemic. Our fully developed innovation is expected to disrupt the market and contribute significantly to the greatest shift in our economies and habits, moving from an old carbon-fossil based transportation scenario to a zero-emissions one. With the use of phosphates instead of cobalt, we are enabling the manufacture of a more affordable product (which avoids cobalt's cost) and a greener solution (avoiding environmental concerns, related to cobalt entering the environment through improper disposal).

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SUBLIME DIGITAL LIMITED	ReconstructEd3D	£97,280	£97,280

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 had a dramatic effect on education and learning delivery, with students unable to attend physical classroom spaces for traditional lessons. This has already negatively affected learner trajectories, and many will not be able to undertake vocational study and work experience due to physical distancing. This can be expected to continue for as long as social distancing is required, and even beyond as sites manage the risk of a breakout amongst its employees.

ReconstructEd3D will help mitigate these impacts by creating a Virtual Reality (VR) application that, in the first instance, will allow students studying CoYo's Design Engineering Construct (DEC) curriculum to visit building sites and visualise their designs, then secondly, use that central experience as a mechanism for the wider curriculum delivery. Young people already use smart devices and communications platforms, the challenge for ReconstructEd3D will be marrying the high value immersive experiences with current mobile technologies, and provide an adaptable solution based on the computational capability of a device.

The final developed solution will give CoYo a simple tool for bringing the site to the classroom, and create intuitive, content rich lessons in VR, on hardware that is affordable and accessible. Helping users embrace distance-learning, whilst creating a remote learning solution with a broad applicability beyond the end of pandemic.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
POCKET CHANGE PIONEERS LTD	Tipjar StaffSaviour: piloting a contactless IoT tipping device and software platform for the hospitality industry	£99,979	£99,979

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 accelerated the growth of cashless payments in an unprecedented scale. This has reduced the volume of tips received by the over 3 million UK hospitality workers---in many cases threatening their livelihood needing to substitute their income with government benefits.

Many customers don't feel comfortable adding a tip to a bill with the existing card readers and are suspicious that tips won't reach workers. In addition, new regulation made it very burdensome to manage staff tips (Tronc) and hefty fines and public shaming causes headaches for operators. Current QR-based solution only solve part of the problem as many people can't or won't use this means of payments.

This is where StaffSaviour comes in to play. With this grant Tipjar wants to select, connect and pilot a designated IoT device---the "StaffSaviour"---which connects via APIs to the existing Tipjar software platform. Allowing every customer to tip via contactless card or phone. Staff and operators enjoy the same benefit as with the original Tipjar QR-based solution but with higher tipping volume and much higher throughput.

Key objectives of this grant project is to bring StaffSaviour from TRL2 (Technology concept and/or application formulated.) to TRL7 (Technology prototype demonstration in an operational environment).

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MOTIVE8 LEARNING LIMITED	Progressay- accelerate pupil progress through remote A.I. powered marking	£49,405	£49,405

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

Due to school closures in the UK, there has been a significant increase in the demand for inclusive digital learning. Whilst most pupils from privileged backgrounds have access to online learning, many from disadvantaged backgrounds do not have such access which is causing the attainment gap to grow even more during this time. Such pupils lack connectivity and access to devices.

For teachers, the lockdown has meant that workload and stress is reported to have increased. Many teachers are now having to care for children of keyworkers, co-ordinating free-school meal deliveries, monitoring well-being for vulnerable pupils which of course does not include the core function of running virtual schools.

Progressay is an award-winning A.I. driven education technology (edtech) platform which allows teachers to create assignments online featuring automated-marking at the core. Our mission is to democratise education using Digital Technology, particularly in light of the lock-downs caused by COVID-19. We were awarded the UCL Educate 'EdWard' and were named as a 'One to Note' in the prestigious EdTech 50 awards, recognising our commitment to research.

We believe we are well-equipped meet many of these challenges. because we have already run successful remote trials with exam boards, schools, universities and multi academy trusts in the UK. Having identified the relationship between marking, pupil progress and eventually social mobility, we want to utilise technology to close the attainment gap.

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MINDLIFE UK LIMITED	EMPATHERAPY: Next generation of PERSONALISED digital, blended and self-help therapy to treat anxiety and depression, and improve wellbeing	£95,094	£95,094

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

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

## Project description - provided by applicants

At least one in five adults suffer from anxiety, depression, and Covid-19 has increased the population of sufferers. About 7m sufferers are receiving antidepressants and other medications which don't cure them and have side-effects. About 1.6m are referred annually to NHS psychotherapy (called IAPT), mainly face-to-face therapy (until covid-19). However, because of limitations of budgets and therapists patients are receiving only, on average, 6.9 sessions, and only 0.3m recover. The existing methods and number of therapists cannot cope with the increased demand.

Because of covid-19 therapists have switched to remote therapy, mainly by telephone or video call, which made the situation worse.

There are some existing digital solutions, but they are not personalised and only about 5% of therapists are using them.

In the last three years MindLife has collaborated with leading experts and NHS Mental-Health Trusts to research more effective methods, to assess, and treat patients, by combining digital interventions, AI/Machine-Learning with advanced psychological science, including:

--Analysis of thousands of patients' anonymised data (using Artificial Intelligence /Machine-Learning). We've developed and tested intelligent algorithms which analyse the user's conditions, needs and progress, and refer him/her to the most effective and relevant type of therapy and therapist available.

--Our digital platform (UpLiftNOW) which enables us and therapists to create appealing interactive self-help applications which can teach the users and empower them to practise in their daily lives relevant interventions according to their needs.

--Computerised algorithms which assess the user's progress every session and provides feedback to the therapist about the probability of patient recovery and whether he/she should change course to make it more effective.

--We've developed digital platforms Ai-Leap, to deliver therapy which enabling therapists to combine face-to-face or remote therapy with digital self-help app which the patient can use during, between and after sessions.

We tested these innovations in RCTs but we didn't have the time and funds to integrate and implement them in NHS IAPT services.

In this EMPATHERAPY project we will integrate all the above interventions and tools, upgrade them to create effective, personalised digital therapy and implement it in NHS services to improve outcome and patient wellbeing.

EMPATHERAPY will be the next generation of mental-health therapy. It will combine the best of the human therapists, who will provide empathy, motivation, hope and advice, using his/her own experience and knowledge, together with expertise and knowledge accumulated from thousands of patients, analysed by experts and AI/Machine-Learning. The patient will receive, in addition to the therapy session, many interactive sessions and Skills Practices which will enable him to implement what he/she has learned in his/her daily life and progress much faster to recover and improve his/her life.

EMPATHERAPY will revolutionize the mental-health therapy to improve the lives of millions in the UK and globally. It will enable MindLife to export the

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Software-as-a-Service, internationally, bring income to the UK, and repay the taxpayer much more than this initial investment.

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CAPTUR LIMITED	Image recognition technology to enable the future of personal transportation post Covid19	£97,593	£97,593

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 pandemic has caused a series of lasting lifestyle changes, including the mass adoption of alternative forms of personal transport in response to the need to free up space on public transport and enable social distancing. Bike sales spiked in April by 60% and the government has responded by investing over £200 million in various future transportation schemes at a national level. At a local level, council's are piloting new Low Traffic Neighbourhood schemes and opening up tenders for micro mobility operators.

The successful adoption of alternative forms of transportation, specifically shared and micro mobility, requires immediate innovation across software, hardware, and infrastructure to build cities for the future and encourage new market entrants. A significant barrier to entry and growth for shared mobility companies is the huge operational cost of vehicle maintenance, representing 10% of the cost per trip and an estimated \$4.5 million annually for a single operator (Bird annual report).

On the other hand, a barrier to adoption from a user perspective is the fear of the potential costs and lack of transparency if they do damage a vehicle or are wrongly charged. In one study of over 2,000 UK hire car drivers, almost a third don't realise they have to pay damage costs up to the excess amount on their rental agreement. Furthermore, damaged vehicles left on roads or sidewalks cause an even greater concern for the accessibility of city streets, especially for disabled groups.

In this project, Captur will develop unique image recognition algorithms that can automatically identify damage to vehicles and determine whether or not that damage is within fair wear and tear guidelines. Resulting in an impartial and consistent third party system to diagnose vehicle damage.

The key objective is to aid in the adoption and rapid market growth of new forms of personal transportation post Covid19. Long term, the innovation also has the potential to extend the average lifetime, sustainability, and accessibility of micro mobility vehicles.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DFS COMPOSITES LIMITED	Optimisation of Mould System Footprint	£99,973	£99,973

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

The wind industry has been drastically affected by the COVID-19 epidemic and as a direct consequence, wind energy installations in Europe for 2020 are expected to be 30% down compared to industry forecasts \[Wind Europe-Newsroom COVID-19\]. Government restrictions placed on the factories that manufacture the turbine blades have limited capacity due to closures and social distancing. To maintain global installed capacity targets and production schedules, a noticeable increase in production capacity of each facility is required.

The project will focus on development of innovative ways to locate the mould halves in a stack-able configuration, with one mould half always remaining above the other, minimising the space required for each mould. Research is required to identify a method of supporting the top half sufficiently, to allow workers to laminate the composites in both mould halves simultaneously, even while the top half is still above the other. This disruptive solution will revolutionise the wind turbine manufacturing process.

The aim of this project is to enable the renewable energy sector to meet the sustainable energy targets stipulated in The Paris Agreement (2015) by reducing the footprint of the moulds (targeting a 50% reduction). This will in turn increase the production capacity of the turbine blade manufacturing facilities by 100%, subsequently allowing more moulds to be installed in the same given footprint. Consideration of system re-usability will also be considered in the research phase of the project aiming to promote circular economy by keeping materials in use, designing out waste and pollution and promoting regenerating natural systems.

This novel technology addresses a number of problems with current solutions:

- 1\ Footprint for required installation
- 2\ Re-usability of mould actuation system for future mould designs
- 3\ Suitability for larger offshore wind turbine blades in excess of 100m

Grant funding will provide the means to develop the first working prototype of a footprint optimised mould actuation system in the world.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SPRYT LTD	SPRYT - Solving the patient no-show problem	£99,900	£99,900

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

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## Project description - provided by applicants

Every year 10% of all healthcare appointments in the UK are scheduled and missed without cancellation (25% in the US), at a cost of £1B. The no-show rate for routine immunisation and screening appointments is a particular problem with Do Not Attend (DNA) rates as high 25%-30%. No-show appointments negatively impact both patient and care teams. Missed screenings from no-shows may result in delayed disease detection, potentially putting patients in danger.

"Missed hospital appointments waste patient and staff time, prevent sick people from being seen at the earliest opportunity and cost our amazing NHS an unjustifiable amount of money. Artificial intelligence has enormous potential to revolutionise healthcare and this is exactly the type of innovation our NHS needs to embrace to ensure every penny goes further as part of the Long-Term Plan" (The health secretary, Matt Hancock, The Guardian, Apr 2019).

COVID-19 has greatly exacerbated this problem by driving up hospital waiting lists as routine procedures and checks were postponed and increasing the demand for digital health solutions to replace face-to-face appointments. Surprisingly, the no-show rate for virtual appointments is higher than in-person (>30%).

SPRYT is addressing this problem with AI by enabling patients to book or re-schedule medical appointments via conversational message or voice. **\*\*No new app to download\*\***. Patients use their preferred communication channel (WhatsApp/Alexa). SPRYT also predicts no-shows, maximizing the time available for patient care and increasing the efficiency of clinics and hospitals.

Our solution combines

- 1) Conversational AI: free-flow conversational agent rather than a pre-scripted, decision-tree chatbot. If the patient can only answer yes or no to a question, the system's learning is very limited.
- 2) Reinforcement learning: for both predicting patient behaviour and to take action to minimise missed appointments. Knowing that a patient is likely to miss an appointment will not, by itself, make them attend. Therefore, even the most accurate model will only be truly valuable if its predictions allow us to take action and **\*\*change the outcome\*\***. Changing the outcome of a no-show is our goal.

Solving the no-show problem is a crucial step in removing a major obstacle in cost effective health care delivery and patient safety in a post COVID-19 world.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ENIGMA CODE LIMITED	DELIVER, a campaign management platform to help kickstart the UK's outdoor advertising industry	£99,950	£99,950

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

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## Project description - provided by applicants

The UK's OOH advertising industry faces many problems in a world defined by COVID-19\.

The general economic downturn and reductions in outdoor audiences have resulted in an 80% drop in OOH spending from March to June 2020\.

Furthermore, long-standing industry issues have conflated with the unpredictable advertising landscape and consumer behaviours. A lack of standardisation, flexibility and limited opportunities for granular demographic targeting in digital OOH means that advertisers have lost confidence and are reluctant to spend their budgets on this channel vs online, TV, radio and others.

Where OOH campaigns are booked, these are currently low cost, have short turnarounds and incur high risks due to unexpected COVID-19 developments. This situation is also adversely affecting the industry's overall sustainability and ambition to implement clean growth and net zero initiatives.

DOOH.com is proposing research to create an online, comprehensive digital OOH campaign management platform and workflow called DELIVER that uses reusable and flexible 'container' files to be run on digital OOH screens. By providing greater flexibility, accountability and granularity of messaging as standard, overall risks will be reduced and efficacy increased for advertisers.

In this way, DELIVER will help to restore advertiser confidence and spending in OOH. Not only will DELIVER help the UK's OOH industry in the short-to-medium term by protecting related businesses, it will also help it to 'build back better' by encouraging more advertisers to run their OOH as digital, flexible and granular campaigns. This will help the hundreds of thousands of workers involved in the UK OOH ecosystem and also directly put back money into local government services, where local councils/authorities receive revenue shares as landlords for OOH sites.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BLUETOOTH MESH SOLUTIONS LIMITED	Street IoT Mesh to provide Smart Parking and Smart Facilities Management plus COVID-19 Park and Track	£81,731	£81,731

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

For this proposal Bluetooth Mesh Solutions Ltd ('BMS') will collaborate with Cambridge Science Park ('CSP') to demonstrate through a 'pilot project' the effectiveness of our SMART parking solution to help all sectors recover from the aftermath of COVID-19\.

BMS is a start-up business, finalists in Mayor of London IoT Competition and CSP is Europe's oldest and most successful science park.

Discussions between BMS and CSP about the benefits of SMART Parking to manage return to office working post-COVID-19 lockdown have been ongoing; relevant given Government return-to-work policies and furlough-reduction. Return-to-work confidence is important to stabilise the economy, and travel-to-workplace and COVID-19 information sharing pre-and-on arrival are important factors applicable across thousands of workplace settings.

A SMART solution to organise the parking of vehicles in a more structured manner according to real time availability is desired. This solution will ensure that staff and visitors do not park vehicles in co-located spaces minimising transmission risk, plus will have a timed entry and exit database for track and trace, and will receive area+business+building specific COVID-19 public health information pre-and-on arrival.

Travel evidence shows post-lockdown that public have low confidence in using public transport and will be more likely to travel by private vehicle. Large Business Parks already suffer from parking demand-supply imbalances and it is likely that office/campus workforce will increase the time spent 'hunting for parking' which is time-inefficient, congesting and polluting.

Our technology-solution is to deploy a Low-Power-Bluetooth-IoT-Mesh-Network to direct vehicles directly to vacant parking spaces on the CSP estate in Real-Time to reduce pollution, encourage sCOVID-19 distanced parking and ensure all parking spaces are utilised to maximum efficiency.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MONACO SOLICITORS LTD	Virtual Lawyer (AI assisted legal self-representation)	£98,900	£98,900

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 too long, justice has been for sale to the highest bidder. But now, through the power of the internet, Virtual Lawyer makes the law available to everyone, regardless of means."

Virtual Lawyer is a more accessible and affordable way to deliver legal representation to employees. It is an online service, providing employment law representation to people whose employment rights have been infringed during the Covid-19 pandemic.

With a 20% drop in UK economic activity since coronavirus, 700,000 job losses so far, and 25% of firms likely to be making redundancies, we would estimate there to be at least 2 million employees in the UK potentially affected by the jobs crisis.

In these challenging times, most people are unable to afford representation from a traditional lawyer due to the high costs typically involved, averaging around £300+VAT per hour.

The user completes a series of dynamically generated questions based on their case, plus a chronology of events. Virtual Lawyer uses cutting edge natural language generation methods, with algorithms trained on our wealth of real case data, to produce advice letters to the employee setting out their rights, and legal letters to send to the employer, with the aim of reaching a negotiated outcome of their dispute.

This will provide access to justice to the vast numbers of people who's employment rights have been ridden over roughshod by employers panicking during this crisis. It can also significantly reduce the numbers of people who are laid off and need to claim benefits, helping the economy recover faster, easing the burden on the already overwhelmed Employment Tribunal system, giving the individual a chance to protect themselves, protecting our communities and protecting the environment by levelling the playing field and reducing the wealth gap.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RENDER NATION LIMITED	Web-based Immersive Show Homes for Expedited Sales-engagement (WISHES)	£74,141	£74,141

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

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Project description - provided by applicants

WISHES (Web-based Immersive Show Homes for Expedited Sales-engagement) is an innovative, business-focused, near-market, R&D project to develop a unique toolkit and delivery platform to design/build/host virtual showhomes: cost-effectively, at high quality and in expedited timeframes.

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

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Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PURCH IT LIMITED	Development of a Method of Fusing Traditional Marketing Methods with Digital Technology Enabling Return on Investment to be Measured Electronically	£92,152	£92,152

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

Purch It Limited is an SME that was founded by Justin Edlagan, Karl Murray, Mark Gardner, and Katy Hackers. The COVID-19 pandemic has impacted the advertisement industry, resulting in lower profitability and reduced overhead expenses. Thus, this industry is currently in a dire situation. PurchIt's software will aid in improving this situation as it enables customers to interact directly with advertised products, thereby improving customer retention and advertising companies' profitability.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
EMENU LIMITED	Artificial Intelligence Powered Sustainable EMenu with Universal Printer Integration Device	£99,348	£99,348

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 placed unprecedented pressure on the hospitality industry resulting in the closure of many establishments. Customers are more mindful of social distancing and hygiene whilst venues struggle to deliver their services in a cost-effective manner, with customer safety and government regulations in mind.

This Innovate UK funded project aims to carry out industrial research and development to support the development of an innovative mobile order and payments solution which will allow customers to safely view a menu, order and pay at a hospitality venue in a manner that enables even the smallest of independent businesses to enjoy innovative best-in-class offerings. We aim to develop features that will give customers a safe and improved customer experience and restaurants a way of increasing revenue lost during these unprecedented times whilst promoting sustainability.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OFFICE & DRAGONS LTD.	Development of a Comprehensive, Intelligent, Automated Electronic System for the Efficient, Accurate Development of Legal Transactions	£97,622	£97,622

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Sam Smolkin and Matt Philson, and soon after joined by Wilson Shrestha, Dragons is a UK-based SME planning to seize the opportunity brought by legal activities and interactions being carried out through digital platforms. Offering their expertise in law, software development, data analytics and engineering, the members of this project aim to develop a machine learning-based platform that could efficiently help legal professionals elaborate contracts. In addition to the creation of jobs during the current economic crisis, this technology has the potential to generate a year-5 post-project revenue of £27M.

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

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



## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KAIZEN TICKETING SOLUTIONS LTD	Covid Safe Stadium Team Sports	£97,927	£97,927

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 purpose of the COVID Safe Team Sports project is to add key innovative features to the company's suite of automated, integrated ticketing, customer (i.e. fan) management, facility booking and ecommerce software for professional and semi-professional team sports clubs. Recent developments include features to maximise non-ticketing sources of club revenue to enable clubs to rebuild their finances after the match ban and continue to play a key social and educational role within their communities.

The grant will enable the company to accelerate the development of innovative seat allocation, ticket validation and bulk processing features enabling clubs to comply with new COVID 19 related guidelines announced by DCMS and the Football Association on 19th August to enable the safe return of spectators.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOCUS SENSORS LIMITED	'Trial Indus' development and demonstration	£99,718	£99,718

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

Optical fibres are all around us, enabling long distance communications powering the internet, CCTV beside highways and signals on our railways. Distributed Acoustic Sensors (DAS) can connect to these fibres and, by measuring distributed dynamic strain, use them to infer the pattern of life near the fibre. DAS has possible use cases spanning multiple markets including; transport, where fibres near road or rail are used to measure traffic; energy, where fibres in boreholes are used to maximise production rates and security where vibrations from footsteps indicate trespass. Focus Sensors produce a new form of DAS called Indus.

Having commercialised Indus, Focus Sensors wish to demonstrate its value across a broad range of applications by performing a number of field trials. Before COVID-19, an extensive worldwide program of field trials was planned. However, inability to travel and work with customers and end users on their site has made it impossible for trials to go ahead as planned. In the new reality, a new approach is required.

Trial Indus will be developed in this program. Trial Indus will be deployable remotely without need for Focus Sensors' employees to enter customer's site. For the first time, using internet networks and cloud computing, Trial Indus will allow remote real-time processing of data collected from customer infrastructure. Results will be viewed on simple, configurable dashboards, that can be made available to customers as well as to FS engineers. Trial Indus will allow streamlined remote deployment and collaboration between FS and our customers at a deep technical level, without any risk of COVID-19 transmission. This will directly accelerate uptake of Indus, leading to numerous benefits for FS and for the UK.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PHARMASEAL INTERNATIONAL LIMITED	Development of an integrated management platform to provide a more efficient and effective system to manage and control clinical trials	£99,706	£99,706

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

The clinical trial process has become increasingly fragmented and requires outsourcing, which has had a significantly negative impact on the cost and time taken to develop and approve novel medicines. The current COVID-19 pandemic has highlighted a need for a digital tool that will allow the virtualisation of clinical trials, while the current economic climate demands a cost-effective solution. PHARMASEAL, founded by Daljit Cheema, Ricky Lakhani, Hugh O'Neil, and Lorin Thwaites, aims to provide a digital integrated management system that will reduce both the costs and time associated with each clinical trial.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PACA POTS LTD	Alpaca Manure Biodegradable Plant Pots and Seed Trays	£99,189	£99,189

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

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

## Project description - provided by applicants

At least 500 million plastic plant pots and trays are produced annually. Of these, over 8000 tonnes are being landfilled because black plastic pots cannot be recycled. Consumers are increasingly demanding alternatives to plastic. BBC Gardeners' World revealed 83% of gardeners are trying to use less plastic, with 73% willing to pay more to do this.

Our product will satisfy this demand by providing a sustainable biodegradable alternative that will deliver significant economic and environmental sustainability benefits over existing competitor products.

The project is an innovative R&D proof of concept to create plant pots and seed trays made from waste alpaca agricultural materials. This meets environmental and economic sustainability objectives by satisfying consumer demand for reduction of plastic use in gardening, whilst providing COVID-resilient alternative income streams for the farming sector.

COVID-19 has changed all lives and the same is true for the farming sector. COVID-19 lockdown led all alpaca trekking operators to cease trading completely for four months. Some remain closed; others are operating on greatly reduced numbers. This project will provide a much needed new income stream for alpaca farmers that utilises their existing waste materials and resources, the project will support the globally emerging alpaca industry, which is in turn assisting the decarbonisation of the fashion industry.

The project represents excellent value for the taxpayer by providing an injection of funds that will act as a catalyst to establish the innovation. Without this funding this project would not be initiated. This project will provide a blueprint for alpaca farmers to licence the technology and also survive economically -- critical for the survival and growth of this emerging sustainable fibre and livestock market, which is of global significance and high value to the UK economy.

The new income stream for alpaca farmers that utilises their existing waste materials and resources, the project will support the globally emerging alpaca industry, which is in turn assisting the decarbonisation of the fashion 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
YOUR FLOCK LIMITED	Development of an Intuitive, AI-Driven System Supporting Employees Working from Home to improve their Well-Being and to Work as Effectively and Efficiently as Possible	£96,123	£96,123

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

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### Project description - provided by applicants

Founded by Michal Wisniewski and Dan Sodergren FLOCK is a UK-based SME that intends to take advantage of the opportunity offered by remote working due to the current pandemic. Offering backgrounds in entrepreneurship and academic research, the founders of this project intend to generate a unique AI development coach that could allow remote teams to work together more efficiently by helping align core values, resulting in increased employee engagement and retention. In addition to remote teams, this innovation should further address mental wellbeing issues posed by COVID-19, and generate a year-5 post-project revenue of £18M.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SociAbility	Sociability Business Platform	£85,200	£85,200

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

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

## Project description - provided by applicants

Sociability is an award-winning, London-based start-up empowering social inclusion through better accessibility information. We empower people with accessibility needs, whether disabled, elderly or pushing a pram, to access the world around them by providing detailed and reliable accessibility information for local venues and shops.

We know that accessibility needs aren't binary. They change between people and between contexts, depending on where, why and with whom you're going somewhere. That's why Sociability doesn't use false binaries like 'accessible' or 'inaccessible' to describe venues. Designed by disabled people, for disabled people, our pioneering accessibility framework gives users the right information to decide what accessible means to them.

Through our mobile and web platform, we combine crowdsource data from users with direct inputs from venue partners. By working with users and venues, only Sociability can deliver high quality and quantity of information to fully empower users to make the right decisions.

Our project helps UK hospitality and retail businesses better serve disabled & elderly customers, and their family & friends, in a novel strategy to deliver social and economic impact. We are building a Sociability Business Platform to empower UK businesses to quickly, easily & accurately publish detailed accessibility information for their store(s) -- independently and at scale. This, in turn, will empower disabled & elderly customers to assess the accessibility & safety of destinations in advance, giving them peace of mind to explore their communities and enjoy greater social inclusion.

Covid-19 has devastated the UK hospitality & retail sectors, and left millions of disabled & elderly people wondering about how they will safely navigate the growing uncertainty of a reopening society. Sociability will empower disabled & elderly customers to socialise and shop with confidence, by having peace of mind that their destination is accessible & safe. Our Business Platform will similarly empower UK hospitality & retail businesses to communicate detailed, reliable and accurate accessibility information directly to their disabled & elderly customers in real-time. Through our platform, any business will be able to rapidly register online, update its venue profile and respond directly to customer feedback in real-time. Our existing mobile app and desktop site will ensure that the right customers have access to the right local information

By partnering with local stores, Sociability can upskill them in disability access & inclusion best practice, ensure that they properly understand the needs, habits and preferences of their disabled customers and, perhaps most importantly, be as accessible and inclusive as possible to ensure they maximise new customers during this all important economic reopening.

Sociability is a passionate, talented and focused team combining a profound social mission with user-led product development, thoughtful technological solutions and robust business practice. As a disabled-led organisation, we are well-respected, well-prepared and well-positioned to empower greater social inclusion through better accessibility information.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
TAYHOPE ENTERPRISES LIMITED	Tayhope - Raising the Technical Readiness Level (TRL) of the final remaining critical component in the commercialisation process for the Net Zero Geo-Engine	£84,899	£84,899

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

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

## Project description - provided by applicants

Tayhope's Geo-Engine project aims to work up the final missing element of a NetZero innovation with global consequences for carbon capture and sequestration. We have spent the last 5 years in research collaboration with various research and industrial partners and are moving towards commercialisation. This work was partially financed by Innovate UK but the majority of the work since 2017 has been internal and self-funded.

We have been perfecting the design of a complex process of phase division and filtration with a self contained engine. The engine uses the flow of dried and filtered gas to create electricity. The energy in this flow is normally wasted but we have perfected a design that extracts significant energy, which can be used to sequester any extracted contaminants.

We are confident in the design and power output. The machine is designed to use off the shelf technology, giving most of the components a TRL of 9, however we have yet to add a fail safe filter that protects the core of the machine from particles in the flow.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Universal Totes Limited	COVID-19 tracked Vaccine Transport solution	£100,000	£100,000

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

Working with district nurses and a major pharmaceutical distribution company, we have identified a significant need for improving temperature-controlled and monitored distribution for medicines, test samples, blood transfusions and vaccines.

Most urgently, we have identified four COVID-19 specific issues that will impact the UK that must be addressed right now:

- \* When vaccines become available, they will require temperature-controlled environments. The UK's infrastructure to distribute these vaccines in these volumes is stretched.
- \* There is insufficient refrigeration capability at surgeries, pharmacies and hospitals to handle the anticipated volumes. Nor is there a central monitoring system.
- \* District and community nurses currently have no temperature-controlled facilities for delivering vaccines. Unused vaccines are therefore destroyed at the end of each day, costing the NHS an estimated £4M annually and reducing the overall number of vaccines available.
- \* Drive through vaccination sites are likely to be required. These will require refrigeration facilities where there is no guarantee of a reliable power supply.

eVc PowerTech are creating a low cost medical supply distribution system comprising of hand-held refrigerated tote boxes that incorporate real time temperature monitoring, and a docking system that will power the totes and act as a communications hub when the totes are in a distribution centre, in a vehicle or at a pharmacy, GP surgery or hospital.

Our vision is to create a system that can be used throughout the healthcare industry for the safe transportation and handling of temperature-controlled medicines.

Additionally, we will be demonstrating our temperature-controlled solution in an electric delivery van, demonstrating that the efficiencies of the system have negligible impact on range.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CREDITONLINE UK LTD	A platform offering instant, inexpensive credit scoring options to lenders allowing them to evaluate their clients and ensure credit is offered to those able to make repayments.	£97,264	£97,264

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

CreditOnline UK Ltd. is an SME that was founded by Egle Krolyte-Plentiene, Nerijus Kazlauskas, and Jurgita Kasakaite. Recently, there has been an increase in consumer credit, with a parallel increase in the non-performing asset ratio. This could be attributed to the current COVID-19 pandemic, which has created an economic decline, with a high rate of job losses and many redundancies. CreditOnline aims to develop a platform that will offer inexpensive and easily accessible credit scoring options to lenders. This will aid lenders in effectively evaluating their clients and ensuring credit is offered to individuals who can make the repayments.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BENEDEX LTD	Benedex - Innovative mobility platform for promoting automation in the post-Covid world	£99,983	£99,983

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

The post-Covid world presents significant challenges to businesses. Fluctuations in both demand for products and workforce availability, as well as increasing need for observing occupational safety, have created peak demand for robotics owing to their contribution to a biologically safe work environment as per new social distancing norms.

While the benefits of automation are unquestionable, developing robotics is complicated, lengthy, expensive, and requires specialised engineering knowledge for designing these machines' main function as well as key subsystems, primarily the robot's mobility system, which is the main consumer of energy, maintenance and servicing in mobile robots.

BENEDEX is developing a unique and innovative motive system for building autonomous mobile robots (AMRs). This solution comes in the form of a modular and agile platform that can be used for any type and design of unmanned, mobile robotics application. Our system is **\*\*STRONGER\*\***, **\*\*CHEAPER\*\***, and **\*\*MORE EFFICIENT\*\*** than any solution currently existing in the market outperforming competitors in both power output and energy efficiency, even as it simplifies, expedites, and cheapens development for robot builders.

This patent-pending system consists of a single controller and a varying number of individually motorised and controlled wheels, based on an innovative design engineered to achieve high performance. The wheels can be set up in multiple configurations and be connected to any kind of body or chassis, supporting the robot's main function and performance via accurate mobility. This versatility provides developers with design flexibility and scalability, as well as with significant reduction in manufacturing costs, greater efficiency and reduced time-to-market, creating real value for global customers and will help the global market cope with Covid19 through innovation.

BENEDEX is committed to environmental preservation and sustainability. We fulfil this commitment by selecting eco-friendly materials, optimising our products for the lowest energy consumption in their class, powered by renewable sources and engineered for heavy duty and a long lifetime to minimise scrapping and waste.

Prior to Covid-19, the global AMRs market was estimated at \$30bn and was expected to grow by over 18% CAGR to \$220bn by 2030. Our system is uniquely positioned to help attack manufacturing challenges following Covid-19, boosting the UK economy and creating jobs in the automation and robotics sector.

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

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Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BENDI.WTF LTD	An innovative browser tool to assist 60% of children's clothes customers to buy more sustainably and drastically reduce waste in the fashion industry.	£96,647	£96,647

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 difficult to get simple information about the sustainability impacts of fashion items at the point of sale. Bendi, a company founded by sustainable fashion technology experts, Mandeep Soor, Benjamin Norsworthy, Johannes Castner, Dr. Elena Lestini and Dr. Vasiliy Demchenko, is working to produce a browser tool to display visual information about sustainability impacts for customers browsing children's clothing online. The tool will provide simple, attractive visual displays to allow shoppers to compare different brands and products. It will enable customers to make informed decisions about the sustainability impacts of their purchases, which will ultimately lead to a more sustainable fashion 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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ECOMOTUS LTD	A Revolutionary Electronic Feedback System For Combustion Engines, Which Could Reduce Emissions By up To 85%.	£99,269	£99,269

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Jason Munro, Kirstyn Munro and Dave Crispin, Ecomotus is a UK-based company that intends to tackle the current challenges regarding engine efficiency. Offering backgrounds in engineering and environmental development, the founders of this project aim to design and test an innovative system that could significantly reduce combustion engine emissions, supporting in this way the transport industry and improving the air quality. In addition, it is expected to generate a year-5 post-project revenue of more than £2B.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
SMARTER CLICK TECHNOLOGY LTD	Unique solution to incorporate machine learning to support customer conversion in online retail space with bespoke, pre-emptive messaging and actions	£92,724	£92,724

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

Smarter Click is an affiliate/digital marketing company that was founded seven years ago by Joe Gilmore, Ennis Al-Saiegh and Henry Boyson. With significant experience as well as large amounts of data, the team is now turning its attention to incorporate machine learning to support customer conversion in the online retail space with bespoke, pre-emptive messaging and actions. Smarter Click sees this as a growth opportunity area as there are limited services providing such bespoke technology-led digital campaigns. Should the development of this technology be successful Smarter Click could meet it's five-year post-project revenue goals.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MONTAGUE SYKES LIMITED	An intelligence system using data sharing and AI to prevent recurring fraud, particularly in the travel industry. Users will be able to use confirmed fraud data to make decisions on whether to accept a risk, with safeguards in place.	£80,006	£80,006

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 David Rose, Barry Gooch, and Bonnie Gooch, Montague is a rapidly growing UK SME looking to provide a sustainable solution for reducing the fraud risk of organisations. Travel companies repeatedly fall victim to fraud and the situation has deteriorated with the COVID-19 pandemic, putting the industry in an even more difficult situation. Montague's system provides a new source of reliable data to help users identify known fraudsters.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
UNDER THE DOORMAT LIMITED	TrustedStays development	£106,612	£99,149

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 late March, UnderTheDoormat learned that NHS staff across the UK were struggling to find places to stay during the Coronavirus crisis. They needed safe places to protect vulnerable people in their household or to reduce long commutes following reassignments.

The NHS has agreements with hotels which can work for large scale re-housing in single blocks, but staff needs are diverse and dispersed across the country. In response, companies in our industry came together under the Short-Term Accommodation Association to meet this urgent need.

We created a scheme to house NHS workers in free accommodation - NHS Homes.co.uk. This scheme grew into an industry initiative with over 30 UK companies offering more than £20m in free accommodation across 2,500 homes across the UK -- as covered in [multiple publications][0].

Our vision in May was to transform this voluntary scheme into the UK's first centrally managed, professional home accommodation portal to government procurement via the Crown Commercial Service (CCS). This would continue to meet the societal need for housing while also supporting the Tourism & Hospitality sector badly hit by Covid.

The first Innovate UK grant enabled us to build the first iteration of this digital portal - TrustedStays.co.uk which enabled automation beyond the NHS Homes site. It enables workers to identify the home they would like to stay in and to request their employer to book it for them. The portal is live & was built on time and on budget.

However, it still relies on manual processes to convert bookings, involving both Property Managers & Employers. This creates a delay in the process.

Our aim with this grant is to build TrustedStays into a fully automated platform, able to provide real-time data including photos, live calendars, and instant bookings for properties. For the first time ever, government bodies will be able to book homes for their staff, in a location of their choosing, at the click of a button.

This scalability will attract more property partners and enable us to achieve our target of 10,000 listings across the UK by end of 2021\.

This build will enable us to place thousands of government workers and to protect vulnerable populations across the country in professionally managed homes that would otherwise be inaccessible to them - at short notice, helping to support during any second wave - all via a single portal.

Currently government and NHS workers are only able to book hotels and corporate serviced apartments. With the growth of the home accommodation sector (>14% of the market in 2018 in London), the professionally managed segment (accredited by Quality in Tourism) provides an important opportunity for government to save costs and provide socially distant options to its workers.

The purchasing power of government and, later, corporates would provide a critical income to offset the industry loss of tourism & discretionary travel in the foreseeable future and help the industry provide a valuable source of income and jobs to communities 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

[0]: <https://underthedoormat.com/press/underthedoormats-nhs-homes-initiative-gains-nationwide-press-coverage-2>

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BATHWICK ELECTRICAL DESIGN LIMITED	High Torque Electrical Machine	£96,301	£96,301

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 need to maintain and develop our own domestic manufacturing base.

Total UK GDP fell by 20.4% in the three months to June 2020, and the manufacturing sector share fell by 20.2%. (ONS)

Our proposal concerns a novel high torque electrical machine which has potential wide application ranging from robotics, machine tools, building site electrification, wind turbines, wave and tidal energy, all with a significant impact on climate change.

BEDL have in recent years developed and patented a type of electrical machine which relies on magnetic gearing to produce high torque economically from a compact space envelope.

One important measure of a compact high torque electrical machine is the airgap shear stress. This indicates the force produced by the machine for each unit of area at the airgap between the moving part and the stationary part of the machine, either a motor or generator.

The airgap shear stress of the BEDL machines is higher than that of any other rotating electrical machines, either conventional or superconducting. Values up to around 700kN/m/m are possible for the BEDL machines with standard materials, most published superconducting machine data implies values less than 200kN/m/m, and conventional general purpose machines of comparable size to the proposed machine (0.5m o/d) can be rated around 30-40kN/m/m if water cooled and around 20kN/m/m if air cooled.

At the heart of the new machines is a magnetic worm and wheel which is functionally the same as a standard mechanical worm and wheel, but instead of mechanical teeth which mesh with each other, there is no physical contact in the magnetic system allowing very low friction and the ability to slip without damage if overloaded.

The proposed new project is to design and build a new kind of specialised electrical machine which produces a high torque within a compact space envelope, producing around 8000Nm inside a cylindrical space envelope of 480mm diameter and 150mm wide.

Comparisons with a typical existing state of the art electric motor show that the new machine can produce over 10 times the continuous torque of a comparable permanent magnet direct drive machine, in a similar space envelope.

The new machine will allow the magnetics and mechanical parts to be designed and validated, but also will enable the development of the required control system.

Findings from the control system project work on this very small machine are relevant to the controls required for much larger machines, such as the 10-20MW generators required for present and future wind turbines.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CHARCOALBLUE LLP	Reopening the Performing Arts - PARAS	£124,698	£99,758

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

This project - PARAS - creates a unique and data-led approach to quantifying audience accommodation and experience in arts and entertainment venues to enable all facilities to have confidence in reopening.

Getting venues safely reopened with public and performer health protected and financial sustainability assured requires careful planning.

A critical part of that planning is working out how many seats can be sold, how the auditorium will work in a compliant way with those seats, what the yield might be and therefore how much money is available to create a production and provide an adequate surplus/profit to reward the investment and risk.

To reopen venues -- it has to be worthwhile to the operator and exciting for audiences. PARAS will give them that confidence.

Juggling these parameters is something every theatre producer does and is expert at when all seats are available.

But without being able to calculate auditorium capacities readily, without being able to be confident of compliant safety in operation, without a way of quantifying the impact these will have on audience experience and without a way to adjust those parameters as public health guidance changes (e.g. 2m social distancing reducing to 1m+) -- it is highly challenging for operators to assess the feasibility of their production or venue. It is no longer instinctive. And therefore inaction is easier than reopening. Awaiting a vaccine appears to be the only route to a return to profitable operation.

A data-led approach is therefore required to unlock this uncertainty and to demonstrate a route back to profitable operation, albeit on adjusted terms.

PARAS (the Performing Arts Reopening Algorithmic Strategy) will provide a means to model this rapidly at low or no cost in 2D; or with additional functionality and fine tuning of parameters in 3D. It will contribute significantly to venues being able to open sustainably as soon as possible.

It will create a unique and data-led approach to quantifying audience experience in arts and entertainment venues which will allow informed decisions on the impact of social distancing and future infection control measures to be made dynamically, to maximise both quality of audience experience and quantity of audience able to attend.

The code writing and auditorium algorithms are innovation that will enable the broadest access to the necessary expertise and will build upon Charcoalblue's experience not only in venue reconfiguration, but also in automated room design and guidance for video conference and collaboration spaces.

As far as we are aware, there is no such facility being offered anywhere else in the world.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HARD-OFF SECURITY LTD	Combating car crime through a consumer orientated anti-hacking security device	£94,483	£94,483

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 focused on combating car theft from cars and of cars, that are keyless entry/keyless start vehicles by 'relay hacking'. This has become endemic in the UK, as it has across the world and is now the most common way to steal cars. Because this 'convenience feature' has critical security weaknesses which make the car's fob easy to extend their range using a relay hacking device which allows the car to be opened and started without having the fob in close proximity to the vehicle. Key fobs remain ON and active 24/7 but are actually only required less than 1% of the time (5 minutes/day). Switching the fob OFF completely renders it unhackable because it cannot transmit or receive a signal.

Our target market is the used car sector which is not being addressed by manufacturers other than Ford who have a solution for their own vehicles.

Our current solution is to install one of a range of 'Kits' into the key fob, which can include a flexible PCB (fPCB) with motion sensing circuitry and an optional external magnetic override switch. The scope and variation in types of keyless entry key fob, i.e. shape, internal space and layout are vastly different across all makes and models of car. Only the battery sizes are consistent. The current solution requires someone trained in key fob design and construction.

This project is to redesign a 'universal kit' so it is simplified and based around the button battery size and made easier for the motorist to fit, without any specific technical expertise.

Our pre-COVID strategy was to sell through a National distributor who, based on the customer's fob presented, trained fitters could select the appropriate 'Kit', fit the kit and test it while the customer waited in the store. A process taking about 5 minutes and not dissimilar to changing a fob battery which they were already doing in store. This overcame the selection and installation challenges faced by an inexperienced buyer. Post-COVID, as an across the board business decision our distributor withdrew, at the height of the lockdown from all new innovation projects. Evidence is available if required.

Although our route-to-market has been abruptly cut, with hindsight, this enforced change to selling direct to motorists will give us the opportunity to gain greater control over our market, a better product, greater opportunities and improved cash flow.

Our new product design will accommodate the technical challenges of 'universal fitment' by achieving the following objectives:

- \* Simple selection
- \* Simplified installation
- \* Widens the scope of key fobs that the new 'Kit' will fit easily (universal fitment based on Battery-size alone)
- \* Reduces manufacturing and retail costs
- \* Reduces Materials used (PCB Substrate and plastics)

Although a fairly major upgrade in terms of reconfiguring the technology it is still based on our core components of the 'All Automatic' Kit, so we are quite confident about its feasibility. The key innovation lies in its simplicity to fit and reduction in components and 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
UP PRODUCTIONS LTD	IMMERSE	£97,968	£97,968

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

Imagine yourself, fully immersed, 'drenched' in real time your favourite artists and musicians work. You can feel the music, you are transported to the mind of the artist, and your sense of experience is immediate, present and fully formed. You can share this experience collectively with your friends. You may want to dance, sit, or just listen.

IMMERSE is a new experience brought to you by UP Productions & AVA, with the leading creators in the sector of visual art & electronic music, realised through leading 4D surround sound and projection partners.

A hybrid of a gig & an art exhibition.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TEKNOBUILT LIMITED	Development of a machine-learning-powered digital HSE system that enables the monitoring of the health and safety of worksites and workers digitally and remotely and in line with ISO 45001 certification	£98,803	£98,803

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

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



Project description - provided by applicants

Teknobuilt, led by Abhishek Srivastava, Jon Baker, Harish Iyer and Naomi Mhatre, is a rapidly growing UK SME specialising in construction technology, hospitality and AI and digital services. Its founders have extensive expertise in data science, entrepreneurship, Health, Safety and Environment (HSE) and auditing. Teknobuilt aims to save UK businesses £1B each year and generate a year-5 post-project revenue of £28M by solving a valuable and sustainable unmet need across various industry sectors.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MATRIX MOULDING SYSTEMS LTD	Ultramelt Flowsim - Developing an approach to model and demonstrate benefits to injection moulding, including 30% cycle time reduction and 28% energy use reduction	£97,975	£97,975

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

Matrix Moulding Systems (MMS) has been formed as a commercialisation vehicle for novel enhanced polymer processing and recycling technologies, some of which have been developed over recent years by our parent company: The Technology Research Centre Ltd. MMS has access to electrical and mechanical engineering facilities, workshop and electronics lab facilities and access to a range of thermoplastic polymer processing and testing equipment.

The COVID-19 pandemic has seen an increase in demand for injection moulded plastic (protolabs.co.uk). However, despite this, most companies are anticipating a negative effect on turnover due to lockdown/social distancing requirements (BPF 2020). Our aim is to target improved growth and to allow injection moulding companies to recover from COVID-19 rapidly. Our technology, Ultramelt can improve productivity while reducing energy and carbon footprint costs to target a greener, faster period of UK GDP growth.

Ultramelt is a technology can improve the injection moulding process and contribute to helping the UK to 'build back stronger' in the wake of the COVID-19 crisis. Injection moulding produces polymer parts used in diverse applications from wheelie bins, telephone handsets and automotive parts to syringes, butter tubs and bottle caps. Therefore our project can contribute to 'sustainably rebuilding' the UK economy; injection moulding has seen increased demand for use in producing COVID-19 test kits (protolabs.co.uk), yet, despite this, most companies are anticipating a negative effect on turnover due to lockdown/social distancing requirements (BPF 2020). Ultramelt can increase productivity within the injection moulding sector while reducing costs associated with production and contributing to UK's carbon reduction targets.

Ultramelt can reduce the temperature required during injection moulding. For example with PP, melt temperatures can be reduced, from 230°C to 190°C, representing an 18% reduction in heating requirements. This therefore reduces the associated energy costs, saving around 137kWh per tonne moulded and reducing carbon emissions by 35kg for each tonne. If this was extended to just 7.5% of the market, we could see reductions of up to 131,490,000kWh and 33,661 tonnes of CO<sub>2</sub>e each year. Ultramelt also reduces the heating and cooling time required for each product, which means higher production within a single day, increasing productivity by up to 20%.

We aim to use the funding obtained to build a special instrumented unit to aid data capture to enable faster development of production systems to commercialise the Ultramelt technology quickly across the UK.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FIUME LTD	A revolutionary, regtech solution utilising AI to reduce regulatory compliance costs by 10x and save customers an average of £250,000 a year	£98,673	£98,673

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 significant proportion of organisations lose profits, potential business, or completely fail due to the complexity of compliance regulation, and the financial burden they face trying to keep up with changing compliance regulations. The COVID-19 pandemic has further exacerbated these existing challenges as compliance regulations are changing at a significantly increased rate, resulting in increased costs for companies during a time when the economy is struggling. Fiume, founded by Mirko Bernardoni and Michael Seddon, aims to provide a regtech-powered and AI vectorised query system to aid compliance in the regulatory sector.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
FETU LIMITED	novel HEAT pump for HOUSEs using fetu's compander (HEATHOUSE)	£95,122	£95,122

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

The decarbonisation of housing stock is essential to meet the net zero targets. With further emphasis for new technology by the phase out of gas boilers for all new build houses in 2025. Currently there is not a solution that fits all with barriers around alternative heating and cooling technologies. Including cost, the ability to retrofit, noise and performance.

FeTu's heat pump based on their novel 'Compander' technology, an integrated compressor and expander solution overcomes these problems. This 6-month project will facilitate testing of FeTu's innovative heat pump to accurately map key performance metrics validating both recent modelling and bench-top tests. Previous work suggests FeTu's system could deliver a Coefficient of Performance particularly in heating applications greater than current state of the art air-source heat pumps. As it is entirely reversible, FeTu can also offer high cooling performance.

A simplistic cost effective system, FeTu offer strong return on investment, high efficiencies and an ability to retro-fit in a variety of dwellings due to their compact size.

With other applications in industrial, commercial and portable cooling, there is significant market reach and potential for strong exports into Europe and the wider world.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TELLJO LIMITED	Development of an automated social responsibility platform driven by AI technology that digitises the process of vulnerability assessment to improve the delivery of services and support to vulnerable customers	£94,657	£94,657

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 wellbeing is becoming an increasing concern and the current COVID-19 pandemic has accelerated this public health challenge, with more individuals requiring governmental monetary aid and/or support. However, the current process for identifying those who are vulnerable relies on their self-disclosure, which few vulnerable people are willing to do. This means that many miss out on available help despite their manifest conditions. TellJO, founded by serial entrepreneur and CEO Dominic Maxwell and Rob Harlow, aims to provide an automated AI-driven social responsibility platform. This platform will provide an innovative and sustainable solution that will significantly improve the circumstances and wellbeing of those who are vulnerable.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AGROCEUTICAL PRODUCTS LTD	Daffodils for Milk – Daffodils providing diversification opportunities for dairy farming and employment challenged by COVID-19 and Brexit pressures. (DAFOMI)	£78,280	£78,280

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

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

## Project description - provided by applicants

**DAFOMI** is a 5 months feasibility research programme to develop emerging solutions to secure post COVID recovery and sustainable increases in the production of milk and dairy products providing diversification opportunities for farming and employment challenged by COVID-19 and Brexit pressures.

**DAFOMI** will directly address the disruption of the wider UK dairy supply chain by providing technologies to improve current protein-feed efficiency, using subproducts of the agricultural industry rich in alkaloids, and enabling future market-growth in speciality dairy products (cheese and others).

**DAFOMI** will benefit farmers who rely on ruminants for their livelihoods by providing higher incomes, more plentiful, nutritious, and cheaper food, and by generating patterns of development that provide employment and benefit to rural areas while at the same time impacting positively on the reduction of greenhouse gas emissions.

**DAFOMI** will obtain trial data validating a disruptive technology geared to boost dairy feed protein efficiency. This will reduce the carbon footprint of the sector, by reducing direct greenhouse gas emissions (currently more than 90% of the corporate dairy industry emissions are methane produced by the cows, mostly in the form of methane).

**DAFOMI** approach is based on greater use of locally available **alkaloids** very specific plant-based chemicals, to improve feed and animal nutrition.

**DAFOMI** targets matching ruminant production to adequate feed preparation to maximize protein feed efficiency and improve milk protein content.

**DAFOMI** 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.

Preliminary **DAFOMI** data estimate that we could improve feed efficiency evaluations by 5-20%, while simultaneously reducing direct methane emissions by 30-35+%.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WORLD WIDE GENERATION LTD	Portfolio Tracker	£99,122	£99,122

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

Founded by Manjula Lee in collaboration with William Medley, Dr Tauni Lanier, and John-Paul Hamilton, WWG is a UK-based SME that intends to address the considerable issue currently posed by the lack of standardised sustainability data available to investors on which to base their portfolio decisions, which significantly hinders sustainable investment. This issue has been exposed further by the strain on social, economic, and environmental systems caused by the COVID-19 pandemic. Offering backgrounds in strategic partnerships, technology innovation, sustainable finance, and development and CSR, the founders intend to develop a product that streamlines and standardises Sustainable Development Goal (SDG) impact performance metrics, which will facilitate better-informed sustainable investment strategies. In doing so, WWG proposes a year-5 post-project revenue of £9.075M.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
XAMPLA LTD	Sustainable Soluble Laundry Bag for Healthcare Hygiene and Staff Safety	£87,647	£87,647

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 created new challenges which in some cases leads to conflicts between safety and sustainability. Single use Personal Protection Equipment (PPE) is one of those cases. Most single-use PPE is made from plastic. This provides vital safety to healthcare workers during the pandemic, but is creating a sustainability problem -- all this plastic PPE is bad for the planet.

Xampla is developing an innovative, entirely natural replacement for plastic, made from plant protein. We've identified a specific PPE application where our materials can enable healthcare providers both to keep their staff safe and to protect the planet. Every day, thousands of healthcare workers in the NHS and elsewhere use soluble laundry bags. They remove their contaminated clothes at work and seal inside a plastic bag. Then they wash themselves, and change into their home clothes. This keeps their families safe, and the hospital or care home then safely handles the plastic bags containing the contaminated clothes, which go into a washing machine. In the wash, the bags dissolve, and clean clothes come out out of the machine.

This is a great application, but there's a problem. These soluble, or dissolving, plastic bags are made from polluting fossil fuel plastic. The plastic is washed down the drain and can reach the environment, contributing to the ocean plastic pollution problem. Xampla's solution is a soluble bag that offers the same hygiene and safety for the healthcare workers, but is made only from plants. It dissolves and washes away, but the completely natural material can be eaten by microbes in the environment with no harm at all.

It's a neat solution to a major challenge created by Covid-19. This project aims to develop, prototype and trial innovative, sustainable soluble laundry bags for healthcare hygiene and healthcare staff safety.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MORE HUMAN TECHNOLOGY LTD	Marketplace to build new low-carbon revenue streams for struggling SMEs	£87,121	£87,121

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

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



## Project description - provided by applicants

SMEs account for around half of UK turnover but 60% believe they will be out of business by April 2021. The sectors hardest hit financially by the COVID-19 lockdown are those that rely on gathering groups of people together, namely the arts, entertainment and leisure industries.

We've seen many Activity Providers attempting to adapt their classes for a virtual audience but they have found that their existing customer base doesn't follow them online. Unable to continue to run group sessions in person and with the challenge of building a new virtual following too great, many are left with no income. Almost 70% of gig workers said they now have no income, and only 23% have some money saved.

By embracing and encouraging digital as a social medium, we will help Activity Providers find new customers and revenue, and cater to the country's social needs in a way that mitigates carbonisation side-effects.

There is a rising demand for high quality virtual events, something we at More Human have seen for ourselves serving our Community Leader customers with our current events listing and ticketing product, but the Leaders don't know how to go about finding the Providers required to run them. So we started manually recruiting, onboarding, and matching Activity Providers to communities on a scale limited by our capacity.

Our goal with this project is build a marketplace to automate this process, and in so doing, enable 180 of the most affected small Activity Provider businesses to land new customers fast, and recover £450,000 revenue within 6 months (increasing to £1m within a year of project completion) whilst mitigating a risk of 188 tonnes of CO2 were demand to be met offline.

With this project, we will build the first ever 'passion economy' marketplace for services, to connect Activity Providers with established social groups who are looking for online activities.

This product build will leverage the demand from our current customers, automate existing manual tasks, and enable us to serve a greater number of Providers sooner, helping them generate revenue before it's too late. Providers will register, list their activities and populate a calendar with their availability. These details will go into our listing catalogue and our existing customers, Community Leaders, will be able to book them and share revenues.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GRITTY PEARL PRODUCTIONS LTD	Using AI and smart devices to make considered talent introductions in media through COVID and beyond	£99,984	£99,984

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

The aim of this project is to create an online networked industry that augments the face-to-face networking within the media sector when discovering and commissioning new and diverse creative talent.

TV/film commissioners and production companies have long struggled with easy access to fresh, diverse talent and so rely on agents, development producers, networking events and often word of mouth to bring forward talent for both on and off-screen roles.

During the aftermath of Covid-19 and beyond this technology will recreate the serendipity that happens 'on the ground' when people meet at networking events/conferences, while going one step further and creating introductions which may not have happened in the real world due to both existing and new structural barriers (travel, cost, availability, visibility, unconscious bias, professional network bubbles 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
REPOPTIM LTD	REPOPTIM WORFLOW MANAGER to enable efficient remote working in the securities financing industry	£99,306	£99,306

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

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

Project description - provided by applicants

Reoptim Workflow Management (RWM) is a tool for a radical transformation of the allocation, management and supervision of tasks in the area of Securities Financing.

Players exchange huge amounts of information on available inventory of securities that can be lent or need to be borrowed. Moreover, the analysis of these is very manual and until Covid-induced Working-From-Home (WFH), exclusively conducted from dealing rooms in London and other large financial centres.

With COVID-19, staff will partially work from home and RWM will enable them to carry out their job in a more efficient manner than was possible before the pandemic struck by providing an array of digital collaborative tools that overcome issues around team management and interaction in a WFH setting.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PHIZIFIT LTD	The development of a smart digital marketplace that will use machine learning/AI to help tailor physical exercise offers to meet the individual health and fitness requirements of schools and their pupils.	£98,583	£98,583

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

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

## Project description - provided by applicants

**\*\*Market need/Covid-19 impact:\*\*** it is recognised that children's disengagement from exercise is a contributor towards increasing obesity in the under 18s (UK Gov 'Tackling obesity', 2020). It is recognised that this can lead to long-term health problems (such as diabetes) that can decrease quality of life and life expectancy, particular for BAME groups. It has also been recognised that this situation has been uniquely caused to grow worse by the pandemic (UK Active, 2020), impacting on the schools education sector's physical education offer, which is seen by the UK Government as a vital contributor to healthy ageing (sic, 2020). Although schools are now reopening, social distancing rules still apply (where possible) and it is far from clear whether local lockdowns triggered by a resurgence of Covid-19 might still close school again, or at least continue to stop/reduce some activities such as physical education or school-based after-school sports activities.

**\*\*Solution:\*\*** One way to reengage children with exercise is to package that offer to meet a specific child's interest (whether yoga, or running, or other gym related activities). A school consortium, working with the online education technology company Phizifit Ltd, have helped to develop the concept of an online solution to this problem which will require the participation of the fitness industry. This solution will help to make the fitness offers visible to a wide national (and potentially international) customer-base - helping these businesses, hard hit by the pandemic, to be more sustainable. The concept therefore does not call for an information only website, but a means to mix and match online fitness offers in a bespoke way to enable schools to manage the tailoring of online-PE to meet individual pupil needs. **\*\*Therefore, this project meets the needs of two pandemic hit sectors -- schools and to support the fitness industry to recover, grow and create new business opportunities.\*\***

Phizifit Ltd proposes the development of an innovative, smart online platform (digital marketplace) that will use machine learning/AI to help tailor physical exercise offers to meet the individual health and fitness requirements of schools and their pupils by generating a smart marketplace - Phizifit Interactive (Phizifit-I). the nearest competitors are companies that can provide access to online fitness offers from various companies, but they do not tailor their offers and they are not designed to be accessed by schools. Phizifit-I will be purposely tailored towards teachers, schools and parents and will be underpinned by an approvals process to enable Covid-19 hit physical fitness businesses compete for this work.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
HARMONY STUDIOS LIMITED	Virtual/Augmented Training, Troubleshooting and Support for Commercial Applications	£85,767	£85,767

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

We are proposing the creation of an industrial product training and support platform based our IP used for an award winning custom development using Mixed Reality (MR) to identify and present low language multi-lingual, visualised training material on product or direct to wall/floor in real or virtual environments.

To date, custom implementations of the framework have been created for a small number of clients for pilot data capture which have surpassed targets for increasing customer knowledge of product use and maintenance, reduced response time for issue resolution, lowered carbon use through reduced travel distances for technicians and increased product availability and increased safety knowledge.

These custom implementations are tailored, intricate and costly but have common threads in their structure and delivery. The objective of the project is to take the experience and IP from previous custom work and create a novel platform which will allow simpler, quick and effective MR based training to product suppliers to industrial and B2B markets.

The platform will incorporate our unique product recognition maps and allow for a wide support on user owned devices for the delivery of 3D visualised training modules, automated training records, self-help troubleshooting and centralised online support. We will include our prototype development for remotely overseeing and interacting with staff during training and allows voice communication and module animation control. For example, a fire safety officer and discuss and interact with a trainee remotely as modules are being delivered as a one-to- or one-to-many event.

This novel proposal is backed by substantial research and development, live trials, client driven data recording and analysis and good market knowledge. The primary goal is to provide an accessible, module based platform for industrial businesses to be able to exploit the benefits of Mixed Reality training, increased efficiency of operations and reduced carbon footprint in their training and support operations.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MOM INCUBATORS LTD.	The mOm Essential Incubator: Neonatal Care for the Covid-19 Pandemic and Beyond	£99,418	£99,418

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 NHS were already facing challenges with unnecessary admissions of term and normal weight babies to the Neonatal Intensive Care Unit (NICU). The Covid-19 pandemic has exacerbated the issue as there is an increase in preterm births and birth complications due to infected mothers. Many of the babies that are being admitted to the NICUs are suffering from hypothermia, a condition that results in the infant's inability to regulate their own temperature. This condition does not require treatment in an expensive incubator, it can be treated in a much simpler and affordable incubator, the mOm Essential.

This greater number of admissions means that there is a higher cost to the NHS to treat the baby. Moreover, admitting babies to the NICU means that the baby is separated from the mother and there is overwhelming evidence that the separation of mother and baby so soon after birth can interrupt the normal bonding process. Preventing this separation is an ethical responsibility for healthcare professionals.

The mOm Essential is an incubator that is compact, portable, easy to set up and easy to use. The Essential can be assembled on any bed, cot or its own dedicated trolley. The mOm provides warmth and care for the newborn on the delivery ward itself, at a fraction of the price of a standard incubator. This cost-effective solution not only allows the mother to rest and receive her own postpartum care in the maternity unit, but also be comforted by the bedside care of their baby in an incubator.

The project objective is to conduct a Summative Study to confirm the observations from previous Formative studies that the mOm incubator is safe and easy to use. We will also need to conduct a randomised multi-site clinical trial which will demonstrate that the mOm incubator delivers the same standard of care as the incubators that are already being used in the hospital. The MHRA have granted us the opportunity of an accelerated pathway to market, through derogation, as they believe that there is a justified need for our device. This grant will help us accelerate the results to prove that our device is safe to use and can provide the same standard of care as existing incubators.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CYTOCHROMA LIMITED	Ethnically diverse liver models for global research and drug/vaccine development	£79,500	£79,500

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

Access to medicines and anti-viral vaccines would have significant societal, environmental, and economic impacts, both in the short and long term. The current COVID-19 pandemic has highlighted the inefficiency in how novel therapeutics are made and tested. New drug and vaccine development takes on average >10 years, with costs in excess of 2 and 0.5 billion USD respectively. Latter stage therapeutic failures amount to over 90% in clinical trials, because predicting reactions in humans cannot be determined with current models and tests.

Cytochroma manufacturers liver models to accurately test the safety and effect of new drugs early in the drug development process. These stem cell-derived liver models are made from induced pluripotent stem cells (iPSC) - an unlimited, sustainable, and ethical source of cells for testing.

Years of research combined with cutting-edge-technology has resulted in Cytochroma's novel, highly reproducible, and scalable method of differentiating iPSC into liver models. These are ideal for drug development/toxicity testing but must be shipped live, which enables rapid testing as cells are ready for immediate use. However, global disruption to numerous academic and commercial institutions as a result of COVID-19 has highlighted the need for a more flexible cell source and supply.

Cytochroma proposes to utilise this funding to develop a cryopreserved (frozen), shippable format for its liver models. This flexible, ethical, and diverse source of cells has the potential to help identify novel treatments for COVID-19 and offset the negative impact on Cytochroma's loss of sales. Frozen liver models can be shipped worldwide, significantly increasing our customer base and enabling access to a growing global market worth over 14 billion USD by 2025.

Cytochroma has recruited a talented, diverse, and capable team and are based in a building that has been selected as "essential" to allow vital research, such as ours, to continue during lockdown. Furthermore, our automation means we have the capacity to generate cells at a significant scale.

We seek a revolution in preclinical testing and substantial improvements in the efficiency of new drug and vaccine development. However, the COVID-19 pandemic and the widely forecast economic recession has adversely impacted Cytochroma's efforts to raise seed capital. As such, the Company needs access to a relatively small amount of grant funding in order to get this project underway.

Global access to more accurate models of human tissue will reduce the need for animal testing, saving time and money. Furthermore, models that can recapitulate the world's diversity will enable the identification of much needed universal treatments for pandemics such as COVID-19.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RAZBIO LIMITED	Semi-Automated Monitoring of Western Flower Thrips	£99,884	£99,884

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

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

## Project description - provided by applicants

Western Flower thrips (WFT) are an important agricultural pest of several crops including protected vegetables and soft fruit crops (1). WFT cause direct damage by feeding on the plant as well as through transmission of different diseases. WFT affected crops not only reduce the crop yield but also affect the crop quality e.g. deformed strawberries thereby reducing the market value of the crops. WFT have developed resistance to the most chemical insecticides and currently WFT control strategies are dependent on effective WFT monitoring and the use of its natural enemies e.g. predatory mites.

Success of these natural enemies relies on their application at a time to coincide with the presence of susceptible life stages of WFT. Application of natural enemies in advance of the emergence of WFT leads to death of these enemies whilst a late application might not be enough to suppress the WFT population. Currently, farmers use manual monitoring of WFT to determine the pest population which is not only laborious but also result in false alarms or inaccurate data collection. Application of machine learning and artificial intelligence offers an opportunity to develop a semi-automated WFT monitoring system

This project brings together artificial intelligence -based monitoring model to monitor WFT population. The monitoring tools will use pheromones to attract WFT to traps fitted with cameras and sensors. Different trap design and imaging techniques will be used to optimise the WFT capture and image quality for automated WFT monitoring. Data from these traps will help in identification and quantification of WFT hotspots enabling farmers to apply control measures timely and precisely.

The project is timely as Covid-19 related restrictions and Brexit have limited the availability of skilled labour for manual WFT monitoring. Our innovation will fill this gap and help UK growers to produce quality strawberries.

The project will help contribute significantly to reduce crop losses thus improving food production per unit area. The life cycle analysis will be used to demonstrate the effect of proposed technology in reducing carbon footprint of strawberry production. This study offers added value as technologies optimized here would offer potential to develop similar crop protection against a range of pest and diseases.

1.van Lenteren J.C. & Loomans A.J.M. (1998) pests & diseases, vol 2, International conference, UK, pp 401--408

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ON DIRECT BUSINESS SERVICES LIMITED	Soteria - Increased security for home-working as a result of Covid-19	£99,397	£99,397

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

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



## Project description - provided by applicants

Soteria is a 'software-as-a-service' platform that provides continuous optimum cyber-security assurance for small and mid-sized enterprises (SMBs) who:

- \* Have been forced to adopt home working as a result of Covid-19\.
- \* Unlike larger enterprises, have limited in-house IT capabilities or experience to manage the new IT environment and operating processes.
- \* Have been left insecure as a result, particularly across the three areas:

1. Infrastructure security and threat protection
2. Data Loss Protection
3. Governance and regulatory compliance

Soteria is currently a working prototype:

- \* Able to manage a useful but limited set vulnerabilities.
- \* Only able to support our own direct customers, as it relies up our internal support systems to work. This project is specifically aimed to address these points by:
- \* Extending the range of functions to include a wider set of security sources and hardware devices that are typically used by SMBs.
- \* Decoupling the solution from our internal support systems and thus allow it to be used by all UK SMBs, whether or not they are direct customers of ours.
- \* Adding features that allow an outsourced IT service provider to manage all their customers from one control panel, thus extending the benefits efficiently to those SMBs who rely on third-party IT support.

The innovation addresses a clear need for security that has been increased with the Covid-19 pandemic.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
UPSTREAM OUTCOMES LIMITED	AI Powered Family Carer Support	£92,664	£92,664

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

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

## Project description - provided by applicants

Upstream Health are revenue making and with the support of NHS England have launched a new product called Bridgit. Our Bridgit platform is all about support and empowerment of family carers to help keep their loves ones well and in their own homes.

The role of a carer is often challenging, with a lack of access to advice and guidance on things like financial support, home care services, or direction on local support services for both the carer and the cared for.

We have recently been working with a Carer Support service that provides counselling, support and signposting to family carers. Carer Support services are commissioned across the UK to help provide support the 6.5 million family carers and help them to provide care to their family members. They do an amazing job and it makes sense for the NHS to support this group and relieve pressures of health services.

We've observed that due to the COVID-19 pandemic the service that Carer Support teams can provide have been impacted. Consultations are no longer face to face, and a lot of the services that where in place in the community have been closed. At the same time due to COVID demand for these service has increased by 53% (Carers UK). The result is an increasingly alienated group of carers looking after an increasingly isolated elderly group.

Through this project we will work with our local Carer Support group to develop a national carer support solution.

This will build on top of our Bridgit platform to provide an electronic version of what a Carer Support coach does.

It will provide supporting information, assessments and content to help identify automatically identify the personalised carer needs.

It will then use knowledge bases and chat bots to provide guidance, suggested action and service recommendations.

Finally it will include options for on demand access to real life care coaches and volunteers, to complete remote video consultations to provide support.

This solution will support the current issues faced during COVID which may persist for some time with restrictions on travel and face to face consultations. However, this platform is also perfect for a post-covid world providing a complete carer support solution at any time and an innovative way to deliver improved choice, and carer support services, on demand and at the point carers need them.

We have already developed a prototype of the solution and received positive feedback from the Carer Support group. Through this project we will build, test and deploy this solution, and develop our service team to provide care coaching services.

The solution will be free at the point of access.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ORCA Computing Ltd.	Project Polar- Energy efficient artificial intelligence using photonic processors	£99,966	£99,966

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

While the rise of artificial intelligence and big data are often presented as the answer to the challenge of big data, they also present a significant challenge to the environment. As the size and complexity of AI algorithms grows, the energy consumption and environmental cost related to training those algorithms and analysing data is growing at an alarming rate. For example, the average cost of training an AI algorithm is as much as 284 tonnes, five times the emissions of an average car, and the amount of computing time and energy needed has doubled every 3.4 months since 2012\.

ORCA computing are a brand new photonic computing company, spun out from the University of Oxford in November 2019\ . In this project, ORCA will develop a prototype photonic integrated processor system that can enable significant speed up and efficiency savings over the AI accelerator products on the market today.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
KBX TECH LTD	Wearable Exoskeleton Exercise and Rehabilitation Device	£99,891	£99,891

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 aim to support the sustainable economic recovery within the fitness & healthcare rehabilitation sectors from the impacts of COVID-19.

The project will specifically focus on overcoming the challenges associated with restricted access to gyms, fitness centres and rehabilitation clinics.

The project will focus on the experimental development of a new breed of innovative wearable devices for training and rehabilitation purposes.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MAVERICK AVIATION LTD	Personal aerial mobility system for onshore and offshore wind O&M sector.	£97,143	£97,143

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

Maverick Aviation Ltd was set up to develop personal air mobility systems (colloquially known as Jetpacks). Exploiting turbine propulsion technology and materials science to disrupt mobility markets in support of engineering challenges, first responders, rescue services, defence and security, and other niche mobility applications.

Maverick is developing a wearable system that allows the operator to reach inaccessible physical objectives over land and water in disaster relief or rescue operations; and also to enable engineers to access elevated or remote critical national infrastructure for maintenance and repairs. This project is to conduct pioneering research and manufacture of a safe working prototype. Maverick's experienced team of aerospace engineers, control systems engineers, pioneering aviators, and business leaders have the expertise to take this emerging innovation from concept to commercial success.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
HELLO LUMINO LIMITED	Lumino: Building a CBT-based digital therapeutic to support women going through menopause.	£99,783	£99,783

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

Lumino is a new company with a bold vision for the future. We want to disrupt the way healthcare is currently delivered, and in doing so help millions of people have better mental health.

Our first mission is to develop a digital therapeutic to support women through the menopause.

By 2025 there will be over 1 billion women in the world going through menopause - that is 12% of the entire world population.

Most women experience symptoms, and for some these can be severe. This can include hot flushes, insomnia and anxiety. Approximately 2.24 million women in the UK are currently experiencing problematic symptoms relating to the menopause.

Menopausal women are also the fastest growing workforce demographic in the UK. Even by conservative estimates, businesses lose £7.3 million a year in associated absences.

Cognitive behavioral therapy (CBT), developed specifically for menopausal symptoms, can help women to manage hot flushes and night sweats (vasomotor symptoms), and has been found to be effective in clinical trials. The North American Menopause Society recommends CBT as an effective non-hormonal treatment option for hot flushes and night sweats. The UK's National Institute for Health and Care Excellence recommends CBT for women going through the menopause who are experiencing low mood or anxiety.

Using digital technology will allow more women to get convenient, high quality support, through scalable solutions. Our approach is rigorous and grounded in evidence -- giving users and clinicians confidence in our products.

Our digital therapeutic programme will give women access to cognitive and behavioral techniques whenever and wherever works for them.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
SUPPLYWELL LTD	SupplyWell is a digital recruitment solution putting control in the hands of teachers and schools.	£98,807	£98,807

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

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

## Project description - provided by applicants

SupplyWell is a fast-growing education recruitment specialist company. Founded by Dan Price, Robin Brabyn and Michael Heverin the co-founders bring their backgrounds in marketing, recruitment and education to address the current need for cost-effective, school-centric recruitment in education for the UK. Outdated recruitment models for teaching are expensive and often do not produce the best matches for schools. SupplyWell's digital recruitment solution uses machine learning to create smart matches between schools and teachers tailored to the needs of each user. This sophisticated service could create huge savings for schools and generate a year-five post-project revenue of £10.2M for SupplyWell.

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

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SILVIBIO LIMITED	Drought-proofing tree seeds: coating technology to increase productivity at forest nurseries	£86,155	£86,155

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

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

## Project description - provided by applicants

Globally, governments and private organisations set ambitious commitments for tree planting and forest regeneration programmes, at an estimated cost of £1.5 billion per year. Demand for tree saplings is increasing in the UK and abroad. However, COVID-19 disruptions caused losses for the forest nursery sector and will likely lead to plant supply shortages in the coming years.

The sector is also vulnerable to increasingly erratic weather. For example, the 2018 heatwave impacted the nursery trade across Northern hemisphere. At UK nurseries, up to 90% of viable seeds were lost due to poor germination.

Finally, without a strong, vibrant domestic timber supply, the UK will become reliant on international imports which naturally have a higher carbon footprint. Depending on where and how the timber was harvested, imports may also decrease global biodiversity.

At SilviBio, we want to address this quandary through our seed enhancement technologies that increase conifer seed germination rates. By improving germination rates, our technology will enable more efficient seed use that directly results in more trees for forest nurseries and helps the Government's reach its tree planting targets. Specifically, we want to modify our technology to improve scalability of application and enhance access to our 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DRAUGHT DROP LTD	Enabling the Brewing Industry's Circular Economy	£99,899	£99,899

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

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



## Project description - provided by applicants

### **\*\*Introduction\*\***

'Enabling the Brewing Industry's Circular Economy' is a bold project to transform the brewing industry. This proposal has been submitted by the founders of Draught Drop -- a young, ambitious company. We bring local draught beer to your door in reusable glass growlers and are known as the milkman for beer! We began Draught Drop to help the UK's vibrant brewing industry and offer customers high quality draught beer in the comfort of their home, in a way that is kind to the planet.

**\*\*\_\*\***

### **\*\*Project opportunity\*\***

COVID-19 has had a particularly detrimental impact on the brewing industry which we will detail throughout this proposal. However, it has also provided the opportunity to bounce back greener and accelerate the transition to a circular economy. The global brewing market is worth \$592bn with growth and long-term trends meaning Draught Drop and the UK industry are well placed to capitalise.

As the sole operators in this market we have identified the technological and commercial constraints to be overcome and are proposing this six-month project, costing c.£100,000 to focus on two categories of innovation:

\* **\*\*Technical R&D\*\*** is needed to design and test core technologies required for a wider roll-out of the Draught Drop business model

\* **\*\*Business model innovation\*\*** to help scale the Draught Drop business and accelerate the positive environmental impact for the beer industry

**\*\*\_\*\***

### **\*\*Execution plan and team\*\***

We have a detailed plan of how we would conduct this project, the resources required and the deliverables we will produce, namely:

1. A detailed design for the ecosystem and the technical requirements of the industry
2. Functioning prototypes of the unsolved technical challenges
3. The IP protection and potential patents to exploit this work

Our team have successful careers in beer, e-commerce and innovation and have significant experience in managing innovative projects and programmes, recruiting talent and working with multiple organisations to achieve outcomes. We have also surrounded ourselves with an enthusiastic and knowledgeable group of partners in the brewing 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

We have laid out an ambitious programme of work packages, identified the resources required to deliver them and have highlighted the risks associated with our proposal and steps to mitigate these.

\*\*\_\*\*

**\*\*Value for money\*\***

We believe this project offers strong value for the UK taxpayer and that now is the time to invest for maximum public benefit. The UK taxpayer stands to gain in a number of ways, via:

- \* Project spend being entirely UK focused
- \* Preserving and creating employment opportunities and skills
- \* Protecting an industry central to British tradition and society
- \* Supporting a business creating deployable IP with strong prospects to grow to a significant scale within the UK and globally

With the investment of public funding, we would like us and the UK to lead the world to a greener brewing 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SCORPIO TECHNOLOGY LIMITED	Scorpio Air Sterilisation System (SASS)	£99,286	£99,286

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

This project is to provide a 'Proof of Concept' demonstrator of the SCORPIO AIR STERILISATION SYSTEM which aims to remove a very high proportion of infective agents such as the COVID virus (SARS-CoV-2) from the air in enclosed spaces, thus providing a further, technological, mitigation against the pandemic and future disease outbreaks.

The motivation behind, and utility of this project is that it will enable the subsequent rapid development of products, based on innovative adaptations to existing technologies. This in turn will enable the production of air sterilisation units for use in air-conditioning and similar systems within offices, transport systems, care-homes, entertainment venues, schools, and other settings. The strategic focus of Scorpio Technology Ltd, is to enable the development and roll-out of these systems, through the use of established supply-chains, worldwide.

Consequently, this project focusses on both the recovery of economic and social activities, as well as enabling resilience to future waves of infection, from this and future airborne diseases.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ELEDECKS LIMITED	Eledecks is an AI Driven Platform Designed To Observe Users' Activities And Predict Agile Teams' Performance.	£98,349	£98,349

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 SME, Eledecks, was founded by Carolyn Mumby who leads the Shine project team comprised of Craig O'Connor, Paul Ratcliff, and Rachel Swann. Currently, businesses are wasting 12% of project cost expenditure on projects which fail completely due to poor performance management.

These teams do not have an online platform that can be used to assess their performance as a group rather than as individuals. This means teams cannot know whether or not they are optimised for agility and whether or not they are likely to fail unless they re-design their profile. If project teams could know their collective score and adapt the profile for high agility levels, it would positively impact on various aspects of a company's productivity and profitability.

The proposed solution will offer an online platform to observe collaborative events online, gather behavioural data and assess the team's collaboration dynamic. The team will be given an agility rating which will be displayed in a graph format on a live dashboard enabling business to avoid costly investment in projects which are doomed to fail due to being managed by a team with a poor agility dynamic. This analysis will aid in improving both agile project success rates and the entire business' performance.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 Green AI Auditor to enable sustainable and resource-efficient AI uptake for the financial services market	£99,620	£99,620

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 accelerated digital transformations across our economy. Many companies successfully navigating the pandemic owe their resilience to unconstrained digitisation programs. Artificial intelligence (AI) lies at the heart of many of these transformations, and so the pandemic is growing, and will continue to grow the numbers of AI models being developed and deployed by industry. However, AI models currently come at a cost: they are computationally expensive to create and deploy, which results in significant barriers to entry for smaller businesses and individuals, and the creation of a large AI carbon-footprint.

The consequences of COVID-19 have brought this problem from the future to the present, and made it even more acute. However, it has been clear for some time that AI's carbon footprint will eventually come to dirty the heralded fourth industrial revolution. Since 2012, the computation required to do deep learning research has increased approximately 300,000 times \[[Allen Institute][0]\], training a single deep neural network can now emanate ~284 tonnes of CO<sub>2</sub>, equivalent to five times the lifetime emissions of an average car \[[Strubell et al][1], [NewScientist][2]\], and building super-human Go playing AI systems has cost tens of millions of dollars' worth of compute \[[Allen Institute][0], [Yuzeh][3]\].

Mind Foundry is developing the Green AI Auditor (GAIA), a technology that will enable business users to predict, monitor and mitigate their carbon-footprint generated through the computational requirements of their AI technology projects. Mind Foundry is on a mission to democratise AI, and has already built the world's most advanced, "human-in-the-loop", AI platform. GAIA will bring Mind Foundry's clients the ability to make their AI digital transformations sustainable.

[0]: <https://arxiv.org/pdf/1907.10597.pdf>

[1]: <https://arxiv.org/pdf/1906.02243.pdf>

[2]: <https://www.newscientist.com/article/2205779-creating-an-ai-can-be-five-times-worse-for-the-planet-than-a-car/>

[3]: <https://www.yuzeh.com/data/agz-cost.html>

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

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



## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WELL THOUGHT LTD	Rent-flex - a scalable digital service for the UK social housing sector to engage tenants impacted by Covid-19 by personalising their rent schedules to improve their ability to cope with income and expenditure shocks.	£99,998	£99,998

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

Rent-flex is a service product which provides social housing tenants with the opportunity to develop personalised schedules of rent payments for the year ahead and agree these with their landlord.

Tenants can underpay on the rent account when budget pressures are at their greatest and make overpayments in other months when things are relatively easier, using rent-flex to smooth cash-flow and avoid taking out credit at times when money is particularly tight (such as Christmas or during the long summer school holidays). There is no interest, or any other fee charged to the tenant and residents can re-flex at any time as their circumstances change.

A previous non-digital pilot indicates that rent-flex is successful in both engaging tenants in order to provide them with financial and budgeting support to assist with current difficulties and helps them plan ahead and smooth cash flow in a much more cost-effective manner than consumer credit. This has long-term positive impacts for both the tenant and their landlord, whose debt collection processes improve because of the early warning provided to them by tenants experiencing financial problems.

The Covid-19 pandemic has revealed the vulnerability of the UK's social housing sector to rapidly rising rent arrears and there is an urgent need to develop more efficient and effective mechanisms to engage impacted tenants and improve their ability to cope with income and expenditure shocks. Social landlords also have large numbers of tenants who have long term health conditions and concentrations of tenants from BAME communities: both groups which have been identified as at greater risk because of the pandemic. For example, 25% of tenants eligible for the rent-flex scheme within Optivo have BAME identities.

The traditional mechanisms for debt collection in the social housing sector, such as outbound chasing of arrears, and enforcement action including court-based processes to recover possession of properties, are likely to be unsustainable given the large numbers of households negatively impacted by Covid-19.

The development of a digital rent-flex solution to assist Covid-19 impacted households offers an opportunity to develop a new, improved, approach to rent management and collection built on a longer-term, and positive relationship of trust between tenants and their landlords. One which provides for personalised rent payment schedules to be provided to tenants in return for improved engagement and communication of financial difficulties, allowing for earlier, and less costly, interventions.

The rent-flex scheme has been developed by a consortium involving:

\\*Well Thought Ltd (brand and marketing expertise)

\\*The Centre for Responsible Credit Ltd (not for profit research into credit and debt amongst low income communities yielding insights into needs and engagement barriers)

\\*Optivo Housing Association (a major social landlord with over 45,000 properties in London, the South East, and Midlands)

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

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\\*Mortar Works Ltd (a new Fintech company providing state of the art digital solutions) and

\\*HACT (an innovation agency providing future oriented solutions, projects and products for UK social housing).

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AURELIE FONTAN STUDIO LTD	Plant-based composite bio-leather (Mykkö)	£53,946	£53,946

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

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

## Project description - provided by applicants

Pollution and climate change are becoming the most influential and impactful threats that we will have to face in our lifetime. What we make, buy and consume will affect many generations after us. Fashion, as one of the most polluting yet lucrative industries, is now forced to face the consequences of its activities. With the current challenges we are facing in terms of water /CO2 pollution, textile waste and global resource crisis, there is an urgent need for more realistic ecological fibre alternatives.

Mykkö is a plant-based vegan option for luxury leather and industry-facing material. Our R&D project will aim to offer an avant-garde sustainable material for the fashion industry with a strong focus on accessories and leather goods, while still being applicable to apparel in following development phases. Our innovative textile production process employs mycelium combined with plant-based biodegradable fibres. Materialising a virtuous cycle by using organic fibres, our product's end-of-life will be embedded in the circular economy.

Through this proposal, we will set up our first pilot manufacturing facility, allowing us to complete R&D on the design-for-manufacturing as well as further optimisation of our local wild mycelium cultures to ensure that the production achieves its intended goals. Eventually making bio-fabrication a reality for the fashion industry, we will contribute to the wider supply chain by breaking the exhausted linear cycle of textile production and offer a radically new model that relies on living systems creating new aesthetics and materials to appeal to more and more conscious 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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OMNIA SMART TECHNOLOGIES LIMITED	Excess Waste Management Solution (EWS)	£99,440	£99,440

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 COVID-19, the world has moved to more online shopping which is increasing the amount of residential waste needing to be collected by the local authority. Not only is it increasing the amount of waste by it is affecting the air quality at residential properties due to the increased number of non electric delivery vehicles and the increased frequency of non electric waste vehicles travelling to collect the waste.

We are proposing to develop technology that enables the Local authority to know in real time when waste bins are full to enable collection on demand, as well as provide the Government with air quality information at a residential level.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RECKOON LIMITED	A project to develop an AI engine to automatically generate social commerce posts for retailers. This would allow a quick, easy and cost-effective way for retailers to achieve an online presence without prohibitive costs.	£97,030	£97,030

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Priya Vrat Misra, Paul Briault and Nili Misra, Reckoon is a UK-based SME that intends to address the considerable issue currently posed by the high cost to retailers of maintaining a current social commerce presence. This issue has been aggravated further by the challenges posed by the COVID-19 pandemic. Offering backgrounds in technology innovation and an excellent sales record, the founders of this project intend to develop a product that provides retailers with an AI-based, cost-effective entry into the world of social commerce. In doing so, Reckoon proposes a year-5 post-project revenue of £195M/£855M.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 HOLIDAY DIARY LTD	DiaryZapp for Schools	£93,799	£93,799

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 measures taken to combat COVID-19 have resulted in long term challenges for children's learning and educational attainment. Schools closing and the country being in lockdown created an environment where children were isolated from school, friends and relatives. Parents had to adapt to home-schooling and teachers had to rapidly work differently to support children's learning remotely, with varying success.

COVID-19 has also provided an opportunity to innovate to support this different and still uncertain way of living and learning. DiaryZapp is an award-winning application that brings the art of journaling or keeping a diary into the 21st century and provides a way for younger children aged 4 to 11 (Key Stage 1 and 2) to connect with their friends and family.

Originally designed as a way for children to avoid learning loss and combat 'summer slide' over the school holidays, children are encouraged to spend a few minutes each day creating a diary page through drawing, writing, adding photos, stickers and creative play. Additionally, DiaryZapp provides a literacy boost through suggesting alternative words to increase vocabulary, using engaging 'Zappicon' characters who encourage and motivate young writers with positive comments and ideas.

This project will evolve the existing DiaryZapp app into DiaryZapp for Schools (DiaryZapp-4S) for Schools through a re-designed database, teacher portal, extensive user experience research and testing to ensure that it meets teachers and pupils needs. This will allow teachers to support children to record their day and take time to make sense of the impact that Covid-19 is having. Crucially, teachers will be able to enhance the learning experienced by the journaling activity, reduce the negative impact of time away from school and encourage creative communications which will help with well-being and improved mental health.

DiaryZapp has already attracted interest from schools but cannot be used with multiple children in its current format. The proposal to develop an app that can be used with a whole class and an additional web-based format will flexibly meet schools requirements. A large part of the development will be user engagement to ensure that the final product enhances both teachers and children's experiences. There is a global market for DiaryZapp and this will be enhanced by the addition of a product specifically for use in schools.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FILIGREE TECHNOLOGIES LIMITED	Filigree: WIRE365	£96,767	£96,767

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

UK-based SME Filigree are using their deep industry and technology experience to develop a collaborative cloud-based SaaS platform, WIRE365, a visual, 'code-free', accessible financial modelling and analysis tool which integrates fully with the Microsoft 365 ecosystem.

Filigree aims to replace the existing costly and unscalable financial modelling tools with a user-centric, accurate, collaborative platform. Current services are unable to manage the complexity needed and do not offer a comprehensive suite of tools.

WIRE365 will also support businesses in their long-term COVID-19 response, enabling flexibility in working situations requiring financial and numerical analytics.

This project will unlock future investment, pulling forwards investment in UK R&D creating new job opportunities.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CLOCKWORK IT LIMITED	A First-To-Market Form Building Application Increasing Field Service Immediacy And Productivity	£96,698	£96,698

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 has been an exponential increase in the demand for tailored forms which has placed increased pressure on organisations that are dependant upon creation and collection of forms. The current technology is failing to provide an effective and time-efficient service and results in high costs to both the providers and customers. The COVID-19 pandemic has further exacerbated these existing challenges as\*\* the current economic climate has resulted in a heightened focus on price sensitivity whilst revenues have reduced and productivity has declined. Clockwork, an innovative software development Company aims to provide a form building software application which can be implemented in the software technology sector to reduce costs and increase the ability for clients to create and distribute forms quickly and efficiently.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SNAP FINGER CLICK LIMITED	Project Condor: A Massive Multiplayer Quiz Service for Pubs and Other Social Venues	£71,352	£71,352

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 plan to develop an immersive, massive multiplayer pub quiz game to be played at social venues that will scale up to 1,000 players at a single game designed specifically to be played on a smartphone. This application will allow for social distancing but will be sufficiently compelling in features and content to increase customer footfall and spend by providing a more entertaining pub quiz experience. The game will make full use of smartphone features such as the use of the touchscreen to draw answers in response to questions.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CAMSCIENCE LIMITED	PREFINAS - Printhead Refurbishment Factory In A Suitcase	£68,450	£68,450

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 remanufacturing of industrial printheads used point of purchase and point of sale retail, and, in packaging and labelling is the most environmentally friendly and efficient method of supplying demand for these parts and an estimate of CO2 saving by remanufacturing and testing these printheads is 5 kg per remanufactured printhead.

Market has shown that commercial printing globally has been severely impacted by COVID-19 with many print shops stopping production completely. However, packaging and label printing has seen an increase in production above normal demand. So corrugated packaging, labels, cartons and flexible packaging volumes have increased. Online retail has increased, increasing print volumes, more single use packaging used for hygiene. Reshoring is taking place. All these growing printing markets use industrial inkjet printheads that periodically require replacement when they stop performing, or a remanufactured, tested and returned to production.

Camscience have decided to pivot the business and entirely refocus on the needs of the industrial inkjet packaging and labelling industry. As part of our market research beginning May 2020 we reached out to the packaging and labelling industry and as a result of this learnt that the industry wanted a cost effective remanufacturing and test solution that was compact (that could sit on the back seat of a car), and did not take up valuable manufacturing space, was light-weight so could be carried by operators who were not physically strong (females, smaller stature operatives).

As a result of this research Camscience have developed the PREFINAS system Prefinas - Printhead Refurbishment Factory in a Suitcase is an integrated system comprising an industrial printhead cleaning technology (equipment, processes and chemistries) and a printhead testing system comprising a miniaturised industrial printing, whose printing ink is also an adaption of the cleaning fluid so that printhead flushing between cleaning and printing cycles is eliminated. The Prefinas system is designed to fit in the luggage compartment, or back seat of a car, light in weight so that it can be carried and moved without the need for substantial strength. It is also cost effective, and an entire factory in a suitcase can be purchased for the price of refurbishing 15 printheads.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HANDHELD HEALTH LTD	Development of a novel application based platform for pulmonary rehabilitation (COPD)	£100,000	£100,000

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

Chronic obstructive pulmonary disorder (COPD) is a chronic lung condition affecting more than 250 million people in the world. By 2030 it will be the third most common cause of death. Patients are treated in different ways, including being given oxygen and other drugs, but symptoms often get worse and patients are frequently readmitted to hospital. This makes COPD expensive to treat, costing the NHS over £2 billion per year. Pulmonary rehabilitation is a treatment where patients are given exercises and taught how to take better care of their condition. This rehabilitation reduces the chances that a patient will be readmitted to hospital, saving the NHS money. If pulmonary rehabilitation was given to all COPD patients then the NHS could save £69 million per year, but it is only currently offered to 13% of patients.

COVID-19 has made the situation even worse. COPD patients are extremely vulnerable to the virus and have been shielding. Many outpatient services, including some COPD rehabilitation clinics, have closed. The pandemic has highlighted that our current pulmonary rehabilitation programmes are not good enough, and need to be adapted so they can be delivered remotely, so that all COPD patients can benefit without the need to leave their home. We have a new technology that could meet this need.

HandHeldHealth Ltd are an Oxford-based company that formed in 2020 in response to the pandemic. We have developed a smartphone app that can deliver pulmonary rehabilitation for COVID-19 survivors. The app will be freely available to COVID-19 patients and will play an important part in helping to improve the health of a generation of pandemic survivors.

We now propose adapting the app so that it can be used to help people with COPD. This will require some changes and additional features. We will then work with patients and healthcare providers to give as many COPD patients access to the app as possible, and begin to test how well it works. Ultimately, we will continue developing our apps to help people with other respiratory diseases, including pneumonia, asthma and lung cancer. By distributing these apps to other countries, and translating them into other languages, we will increase their accessibility even further and make the UK the world's leading supplier of pulmonary rehabilitation solutions.

Another key goal for HandHeldHealth is to reduce the environmental impact of pulmonary rehabilitation. Incredibly, 5% of British road traffic is NHS-related. Home-based rehabilitation has actually been shown to be more effective than going to clinics, and by providing our technology we will reduce the travel-related carbon footprint. Social and economic factors mean that some people can't access pulmonary rehabilitation, for example if they can't afford the cost of regularly travelling to the clinic. We will work with healthcare providers to increase access for all patients (regardless of their background or economic status) to this rehabilitation technology from their home, which will therefore increase environmental sustainability, reduce costs for the NHS, and improve health for COPD 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FREEDOM ONE LIFE LIMITED	Smart power wheelchair electronics	£96,949	£96,949

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

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

## Project description - provided by applicants

Freedom One Life is developing next-generation wheelchair electronics, targeted at solving the most common failure points of existing power wheelchairs.

Wheelchair electronics systems are one of the most unreliable parts of power wheelchairs, the designs have not changed in 25 years and they rely on constant maintenance and servicing, producing waste in the form of damaged or used parts. Service engineers spend a great deal of time travelling to often the same users that have constant issues.

This project is intended to enable us to take the entire wheelchair electronics system design in house. This allows us to strengthen its supply chain by gaining control of the supply of vital high-cost components, enhancing the quality of products supplied by ensuring they are made to rigorous in-house quality standards befitting a medical device. The cost of goods is also reduced.

What this means for the user is greater confidence in their chair, as well as more independence and mobility. Due to the increased reliability developed in our product compared to conventional powerchairs, there will be much less waste from parts having to regularly be replaced. There will also be less resource use as time and fuel spent travelling to repair repeat issues will be significantly reduced. Our business model disrupts the current norm of constant maintenance which leads to greater sustainability.

Strengthening of supply chain and lower cost of manufacture are significant advantages to overcoming the issues caused to our business by COVID-19, and it allows us to offer a solution that benefits equality, diversity, inclusion and sustainability.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ARALIA SYSTEMS LIMITED	AI assisted quantitative visual inspection of 3D surfaces	£110,255	£99,230

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 adds 3D and multi-spectral imaging to smartphones so that they can be used for a wide range of test and monitoring purposes including QVI. The products delivered by the project are low-cost and can be used by anyone familiar with mobile phones.

The project supports sustainability and the circular economy during the period of COVID-19 restrictions by facilitating inspection and test in a wide range of industries, including construction, manufacturing and infrastructure.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CARBON CUT HOLDINGS LIMITED	Insertion System development	£91,398	£91,398

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 5.4 million three storeys plus buildings built before 1980 (English Housing Survey, Jan 2020) in the UK requiring insulation, but because they have continuous wall cavities from the bottom to the top of the building there are no current cavity wall insulation methods on the market to provide damp-free, adequate insulation. Carbon Cut has developed a tried-and-tested novel 'retrofit tray' that can be fed into the cavity walls of these buildings to resolve these problems. The project is to develop an insertion system for the patented Carbon Cut cavity tray solution. A blueprint for the insertion system has been developed and patented. The next stage is to build a prototype insertion system so that it can be tested under 'laboratory/site' conditions (industrial research) to show that the existing Carbon-Cut tray can be applied to the required height and length of cavity. We have support from the University of Portsmouth to evaluate the effectiveness of the insertion system and we will involve the insulation industry as the service user. By 2026 Carbon-Cut will be able to apply the carbon-cut system to 46,764 flats, helping 100,000+ people with decreased energy bills and eliminating damp conditions: leading to a better quality of life. There are currently no companies involved in the building insulation industry, working with pre-1980s building stock with this issue. The solution currently had been to, e.g. clad the building (ban, while the Grenville Tower enquiry is running). There is a health and safety issue related to this. This project will help meet unmet regulatory requirements (2018) regarding insulation for tenanted properties and Government policy requirements such as amendments to the Climate Change Act 2008 (Net Zero Carbon). The Government says (July 2019) widespread deployment of energy efficiency measures will need to be a key pillar of achieving this by 2050. Since the target buildings are not currently suitable for cavity wall insulation, the introduction of Carbon-Cut's solution will enable the insulation service industry to offer insulation to a whole new cohort of customers. This will generate new revenue for these companies and UK plc and creating new skilled trade jobs to deliver these new opportunities.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 SIGNS FOR TRANSPORT LTD	COVID 19 Real-Time Smart Digital Signs	£130,748	£98,061

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 to undertake the experimental development of a real-time digital signage platform to generate hyper-local digital signs displaying real-time COVID health data, visitor advice and emergency notifications. Tailored for every UK place type (i.e. shops, schools and hospitals, to hotels, stadiums, parks, cinemas, art galleries and offices) and designed 'out-of-the-box' for display on any connected totem, kiosk or screen.

Our vision is to enable all of society, regardless of their access to Smartphones, to access real-time information as they move through the built environment, providing all people with the information to help them adjust their behaviour to meet local COVID restrictions and advice.

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

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
COOLBYTZ LIMITED	Coolbytz - The only transparent and sustainably focused marketplace for connectivity and infrastructure.	£99,448	£99,448

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Coolbytz platform will allow digital infrastructure to be bought and sold remotely, providing processes for verification of technical specifications and environmental sustainability.

We are on a mission to build trust, standardization, efficiencies, and sustainability within the datacentres and connectivity infrastructure sector. Aided by machine learning, artificial intelligence and blockchain, we are engineering a world-first platform capable of delivering end-to-end transparency and transactions all in one place. Our algorithms will generate an unbiased, real-time and sustainably aware marketplace where buyers and sellers from the private and public sector can converge to transact pre-verified assets at scale.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
EFC LIMITED	Celes - Enabling Demand Side Response	£99,409	£79,527

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 take a concept - Celes - and turn it into a useful pre-production prototype.

Celes is a device for the home that will measure and control electricity usage - mainly for time insensitive application ("controllable loads"), such as vehicle charging, electric heating and electric cooling.

Celes will show electricity generation, imports and exports, and consumption in the house. Consumption will be shown for the home, and for key loads. It will also make automated decisions on which loads to turn on or off.

For homes with renewables it will help to match generation to consumption. For other homes it will help to exploit low cost tariffs (e.g. for vehicle charging) and to control electricity usage in the home. For the country as a whole, it will help to match variable supply from renewables with demand, controlled by Celes.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HOMETOWNPLUS LIMITED	A first-to-market AI driven platform and app which tracks and predicts social impacts of frontline community organisations, providing accurate and transparent decision making data.	£99,468	£99,468

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

The significant lack of funding associated with the inability to predict the impact of frontline community organisations has led to many of these organisations becoming under threat. Community organisations are imperative to society and the COVID-19 pandemic has highlighted this while exacerbating the challenges surrounding these organisations. HT+, founded by entrepreneur, Mike Riddell, aims to develop an AI+SaaS platform - termed HT+ Tracker - which tracks and predicts the social impacts of community organisations. This tracker will deliver an innovative, affordable, and sustainable solution which will provide quick, trusted, and transparent data to make social value relevant again to the majority of frontline organisations helping unlock new funding opportunities.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PERSONA EDUCATION LTD	Personality insights algorithm, natural language generation AI and data visualisation for life skills e-learning	£106,471	£99,018

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

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

## Project description - provided by applicants

Even before COVID-19, wellbeing among UK children fell sharply from age 12, and was 21% lower at 16 than at age 8. Loss of agency among teenagers was rising and the UK scored lowest in the OECD on pupil life satisfaction.

On top of these disturbing facts, a key challenge arising from COVID-19 is the further negative impact on secondary school student wellbeing. The OECD and others are warning of continued disruption caused by a shift to blended online and in-school learning and short-notice school closures. More attention is being given to the continuity of academic learning than to students' socio-emotional development, a gap which schools must address to avoid further declines in wellbeing.

Partly funded by an Innovation UK grant, Persona Education has developed an e-learning platform for secondary schools, called Persona Life Skills. This web app aims to improve wellbeing among students, using a unique personality insights framework to inform the development of life skills such as self-control and resilience. Version 1.0 of the Persona Life Skills app will be released in mid-September 2020.

The pandemic has also created uncertainty among teenagers about their future employment prospects.

Both students and employers believe developing life skills helps to improve employability. Many of the life skills we aim to help develop - eg. communication skills and time management - will contribute to their employability.

We are applying for this Innovate UK grant to fund an R&D-led innovation project that will contribute to the education sector recovery from COVID-19 and help to limit the future economic impact on the current cohort of teenagers. This funding will transform our v1.0 web app into a commercially viable product that takes the state-of-the-art to the next level, which will help secondary schools address the wellbeing and employability challenges.

Specifically there are three innovations we plan to use grant funding to develop: An enhanced algorithm; Natural Language Generation AI reporting; and advanced interactive visualisation.

As a cloud-hosted web app, Persona Life Skills is purposely built to perform equally well in school or in remote learning facilitated by video-conferencing.

The Persona Life Skills app is culturally agnostic. The underlying personality insights framework has been shown to work equally well for people of any cultural background and has been used in practice with 18 different nationalities. Moreover we have built positive action and accessibility features into the app, following W3C Web Accessibility Initiative guidelines.

Our key objectives for the project are:

1. Conduct research to inform innovation development plans
2. Enhance the v1.0 algorithm
3. Develop natural language generation AI reporting capability

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

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4. Design and develop interactive visual reporting
5. Incorporate these improvements into the Persona Life Skills web app, market-test and finalise v2.0
6. Make the product available to secondary schools

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IGENOMIX UK LTD	Development of the World's First Non-Invasive, Pre-Implantation Genetic Test (PGT-M) for Genetic Disorders in Embryos	£98,499	£98,499

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

Genetic disease results in significant morbidity and mortality in the population and early detection is key to improving outcomes and reducing suffering for affected individuals and their families. Couples at risk of transmitting serious genetic disorders to their children currently have the option of undergoing IVF and testing their embryos (using an invasive biopsy method) to prevent the birth of affected children. However, there is a significant lack of cost-effective, accessible and, specifically, an absence of non-invasive embryonic genetic disease detection methods. In addition, the COVID-19 pandemic has further impacted the existing challenges for current detection methods because of IVF clinic closures and redeployment of resources in the NHS. Igenomix, led in the UK by Professor Alan Thornhill (working alongside technical, scientific and entrepreneurial experts Seema Dhanjal, Darren Griffin, Alan Handyside and Roy Naja) aims to provide a non-invasive test to diagnose genetic disease in human embryos (ni-PGT-M). This test will provide an innovative, cost-effective and sustainable solution that will significantly improve the outcomes for couples at risk of transmitting genetic disease.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MUMBLI LTD	An IoT device to help the hospitality industry to recover inclusively and safely through innovative hearing wellness.	£99,933	£99,933

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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, prototype and test a new Internet of Things (IoT) device to monitor data on sound performance in public spaces, powering a digital hearing wellness platform. This platform will help people to manage their own hearing health by making informed choices and means businesses can appeal to customers based on the sound performance that they curate. It will also help businesses to be more COVID-secure by enabling them to manage sound levels, which reduces the volume people need to speak at to be heard.

How many times have you struggled to concentrate on your work because of background noise? And how many times have you left a loud restaurant with your ears ringing and your throat sore from shouting?

More than half of us are surrounded by noise and sound that negatively affects our productivity, wellbeing and behaviour. And over 60% of the population are affected by some form of decreased sound tolerance. While the impacts of hearing loss may be more acute for some people than others, to the point of disability, it affects almost everyone at some point in their life. We know that it becomes more severe as we age, and noise can make some spaces unattractive or even intolerable to many.

Mumbli is a digital platform for hearing wellness. It helps businesses and consumers to access, benefit from and contribute towards hearing wellness together.

Mumbli's approach is to develop a holistic technology-based system that makes hearing wellness attractive for everyone, and to break through the stigma of it being restricted to a smaller audience of people with a disability.

Following extensive background research, Mumbli has developed a unique approach to easily communicating information to users about sound in public spaces, based on data about sound in that location.

This project will develop, prototype and real-world test an innovative new IoT-enabled device to actively record sound data in public spaces. The data it records then powers the insights that are offered to users of Mumbli's hearing wellness platform.

Businesses that partner with Mumbli to use the device and the platform can actively choose to monitor and curate the 'sound personality' of their venue - such as a cafe, a bar or a shop. Their partnership with Mumbli gives them access to a 'Certified for Sound' certification.

This certification enables users to rely on Mumbli's platform to find venues that match their own particular hearing wellness needs and preferences. For example, that might be a cafe where they know they can work quietly, or a restaurant they know they can hear their friend talk in or a bar that will reduce the risk of further hearing damage. The platform acts as a gateway to other devices and services that can help users to further manage their hearing wellness in the future.

As the hospitality sector recovers from COVID-19's impacts, Mumbli's platform has potential global appeal and will help businesses to appeal inclusively to audiences who may have otherwise been deterred from going out.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ANNWEN LIMITED	Pilot re digitally enabling automated public services in minority languages (Welsh) using distributed text-to-voice	£97,983	£97,983

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

Annwen is an inclusive, accessible, always available, digital companion.

Annwen will be a new type of smart speaker designed as an inclusive, accessible, always available, digital companion. Annwen as service is always available. Annwen is not dependant on broadband and power as it has an onboard memory cache, two network backups and backup power.

The Welsh Language Act of 1993 placed a duty on public and some private bodies to offer Welsh language. While it is true that many Welsh speakers are bilingual, they have an expectation and a right to be served in the language of their country. In respect of digital services, Welsh speakers are being disenfranchised, and it is Annwen's role to be part of addressing this. Annwen is inclusive as Annwen will make use of the latest developments in speech and natural language processing to deliver a Welsh language companion.

The availability of low-cost processor technology means that we can deliver a device at a low cost with comprehensive performance, capability and excellent market economics. The expertise in particular within our team around industrial design, electronic systems, control platforms, wireless technology and audio hardware to quickly assemble a commercially scalable hardware product design.

Annwen devices will be connected to their own wireless network of connection hubs to create a new low-powered wide area network that will allow for a virtual mesh to mirror a backup peer to peer mobile mesh network. This will provide the resilience of connectivity needed for the most rural of isolations. This avoids the need to install broadband to begin using Annwen services. As broadband roll outs are available in new rural areas, Annwen will be able to offload updates to broadband connectivity but will maintain the LP-WAN connectivity for heartbeat and failover services.

Annwen will also provide a content creation platform with a native language and community focus, built with a sustainable and shared commercial business model.

Annwen will provide a common interface to services by different public providers and agencies, providing co-ordinated citizen experiences for the first time. Annwen will provide standardised content tools for providers and agencies to deliver secure citizen services and communications for the health, wellbeing, mobility and inclusion of citizens.

For communities Annwen's content platform will enable localised media hubs for creating local content, commercial services, relevant communications, localised advertising and the administrative and moderation services.

Annwen is built on a platform to deliver at scale created by a team that has the expertise to develop this into a global business, born in Wales. Annwen will expand to additional languages relevant to the communities in Wales as a first priority and then expand out into other global communities not served effectively by incumbent digital assistants. In each case Annwen will not only remove barriers to usability from language but Annwen will also continue to bridge societal digital divides and remove barriers to greater digital inclusion,

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BREGO AI LTD	Development of a system utilising AI and ML technology to create extremely accurate predictions of vehicle depreciation, valuations and data modelling scenarios for new, used and concept vehicles to support the automotive industry	£97,042	£97,042

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

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Project description - provided by applicants

Founded by Simon Hunt, Philip Hunt and Matthew Stone, Brego is a UK-based SME that intends to support the automotive industry by lowering car financing costs, helping boost vehicle sales. Offering backgrounds in product management, data engineering and entrepreneurship, the founders of this project intend to generate an AI valuation tool that will give better predictions of the depreciation and residual value of cars. In addition to manufacturers and car dealerships, this innovation should encourage greater uptake of electric and hybrid vehicles, and generate a year-5 post-project revenue of over £8M.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DARESBURY PROTEINS LTD.	Scalable, sustainable and cost-effective manufacturing platform for a rapid production of trimeric Spike, the most valuable key SARS-CoV-2 antigen to support domestic diagnostic industry	£99,975	£99,975

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

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## 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 38 SARS-CoV2 antibody tests received Emergency Use Authorisation by 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 offer a sustainable production platform and deploy their technology to manufacture the most valuable antigen in the shortest timeframe and at the lowest costs. This will 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 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>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ICENI LABS LIMITED	NEWS 2 Compliant Respiration Monitor	£100,000	£99,000

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

NEWS-2 is the latest version of the National Early Warning Score (NEWS), first produced in 2012 and updated in December 2017, which advocates a system to standardise the assessment and response to acute illness. NEWS-2 has received formal endorsement from NHS England and NHS Improvement to become the early warning system for identifying acutely ill patients -- including those with sepsis -- in hospitals in England.

The NEWS-2 is based on an aggregate scoring system in which a score is allocated to physiological measurements. The six simple physiological parameters form the basis of the scoring system:

- 1\. respiration rate
- 2\. oxygen saturation
- 3\. systolic blood pressure
- 4\. pulse rate
- 5\. level of consciousness or new confusion\\*
- 6\. temperature.

Respiration Rate (RR) is one of the most important vital-signs for identifying patients at risk of poor medical outcomes, yet, because it cannot be reliably measured, it is infrequently and poorly utilised. Clinical assessment is unreliable with, for example, 52% of doctors missing abnormal RR through "spot" assessment methods. Existing devices to measure RR are cumbersome, reduce patient mobility and can be unreliable. As such, they are rarely used in un-sedated patients.

SPARTA is a non-contact breathing rate monitor that will give medical staff and carers real-time indication of respiration-rate changes.

The device achieves this by continuous RR monitoring, determination of RR change, whether increasing or decreasing from the norm, with the ability to give warnings of deterioration up to an hour in advance of when intervention is needed. The device allows data-driven medical decisions and has the potential to save lives.

SPARTA will enable the community, home and other remote setting monitoring of people with respiratory disease and provide a reliable measure of the progression of the disease and indication of when medical intervention is required.

The early indication of the need for medical intervention has been shown to be a significant factor in improving survival rates from respiratory diseases such as CV-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

SPARTA is non-contact. It only needs to be placed near to the patient, typically next to or under the bed, allowing remote monitoring of infectious patients with reduced risk to healthcare workers.

Our vision is that SPARTA can reduce morbidity and mortality during respiratory disease and other disease occurrences requiring bed monitoring. In particular, by ensuring timely admission to hospital and thus reducing the burden on hospital 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ICARUUS LIMITED	Expansion of decentralised make on-demand apparel manufacturing network to reduce manufacturing waste and increase apparel usability and recycling	£80,928	£80,928

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

This project proposes to rapidly expand a decentralised, on-demand manufacturing network to provide apparel brands and retailers with a rapid, sustainable, and commercially competitive "closed-loop" production system.

UK citizens discard around a million tonnes of textiles per year with around three hundred thousand tonnes of this going to landfill (the overwhelming majority being incinerated). Pre-production waste through inefficiencies during the manufacturing process contributes an additional eight-hundred thousand tonnes of textile landfill throughout the supply chain, whilst the incineration of unsold, "deadstock" augments the UK fashion industry's landfill toll. When paired with the additional carbon footprint from the logistics of an offshore supply chain and consistent concerns over unsafe, exploitative labour practices, it is clear that the UK fashion industry faces significant challenges to reduce its environmental impact.

To address these challenges, we shall ambitiously expand a decentralised make on-demand manufacturing network to achieve rapid and sustainably produced apparel that will significantly reduce textile landfill, facilitate higher apparel utility and allow for increased textile recycling. This will allow apparel brands and retailers to engage in an economically viable, "circular economy" supply chain which has vast potential for growth.

This project is proposed by Icarus Limited, a small, London based apparel and equipment design, and manufacturing business.

During this nine-month project, Icarus shall aim to expand a decentralised, circular manufacturing network to develop several iterations of high-quality core pieces that will be market-tested and manufactured under lockdown conditions. The evidence gathered will enable Icarus to release economically viable, rapidly produced apparel alternatives that will be ready for full-scale use by fashion brands and other retailer stakeholders. Furthermore, Icarus will leverage this network expansion to create additional supply chain value to fashion brands through repairs and textile recycling capacity.

A successful circular manufacturing network requires stakeholder approval. As such, Icarus has begun preliminary operations to provide circular manufacturing methods to UK healthcare stakeholders with a view to expanding to the UK fashion industry. Obtaining grant funding will greatly improve the scale and time frame of the expansion and ensure that the project has the best chance of reaching a successful conclusion.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AXIS WORKSHOPS LIMITED	Sustainable and inclusive virtual collaboration	£99,534	£79,627

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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\*\***

COVID-19 has reshaped how the world works. A sustained shift to virtual working creates an opportunity for a post-pandemic recovery that is more sustainable and inclusive: Eliminate carbon associated with day-to-day commuting and journeys taken (often by air) for meetings and workshops

- \* Make home working a viable and respected alternative, increasing gender equality and access to those living with a disability. This in no way detracts from the need to make physical workplaces more accessible
- \* Reduce workplace bias toward minorities and women
- \* Help UK professional services and events firms operate successfully in a virtual environment to provide a source of competitive advantage (in alignment with the ISCF Next Generation Services Challenge)

This project will extend the Axis digital collaboration platform to:

- \* Extend coverage of meeting and workshop types to maximise reduction in business travel (and carbon) by making virtual at least as good as face-to-face
- \* Support virtual collaboration that uses analytics and decision science to increase inclusion and remove bias
- \* Maximise workshop and meeting accessibility for those living with disabilities enabling those disadvantaged by the physical workplace to gain an equal voice and set of opportunities
- \* Provide free sets of workshop templates designed specifically to support SMEs and corporates to innovate around sustainable and inclusive growth

### **\*\*Innovation\*\***

In a world of remote working, video conferencing is invaluable for simple meetings, but it does not allow for structured collaborative thinking and decision-making. It doesn't ensure that every voice is heard, and decisions are made free from bias. Axis can.

We now need to take the Axis platform further and faster, with an emphasis on driving sustainable and inclusive growth. We've teamed up with three mission-driven organisations: Private Goodness (workplace equality, human rights and sustainability), Unida (gender equality) and Purple Goat (disability equality) and Accenture (one of the world's leading professional services firms, serving over 75% of the Fortune 500 with over 500,000 employees) to co-develop the Axis platform with the latest web-based technologies for immersive collaboration and analytics-enabled decision-making.

We will extend the platform to build Axis' core sources of differentiation vs. the current state of the art (digital whiteboarding solutions including Teams Whiteboard, Mural and Miro).

A re-build of the front end in order to enhance usability and accessibility;

- \* Implement React Hooks, improving how component and application state can be managed

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

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



- \* Enhance the use of GSAP and canvases to deliver complex meeting agenda setup where in-workshop data flows can be intuitively configured
- \* Ensure accessibility combining enhanced perceivability and understandability (for instance making sure that everything has properties for alternative texts) and accessibility optimised navigation, so that regardless of circumstance, device or location anyone can participate effectively

Develop a python-based analytics service to deliver insight creation at the speed of a live workshop e.g. algorithms for affinity mapping to visualise the strength of connectedness between ideas. A switch to container-based infrastructure, using AWS' EKS Kubernetes to enable more rapid delivery of new features and increase scalability and resilience.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GOPHR LIMITED	Gophr- A next generation delivery network to support the economic recovery of local community retailers.	£99,342	£99,342

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

Building on the established Gophr same-day courier delivery solution and a UK wide network of couriers, the project seeks to address the following market challenges which have been notably magnified following the COVID-19 pandemic:

-Independent food-retailers and restaurants failing to match the growth seen by larger operators eg Supermarkets

-Reduction in high-street footfall due to ongoing individuals' concerns to minimise exposure alongside a much-accelerated wholesale learnt change in the way consumers now shop

-Reduction in on-demand taxi services (Uber reporting a 70% reduction in demand)

Gophr seek to address these challenges through the development of online toolkit that will enable independent retailers from Grocers and café's to butchers and chemists to better exploit home delivery services -- facilitated through Gophrs courier network of \>9K registered drivers with access to a further 10K strong network of taxi-drivers.

Using the solution, retailers will be able create a simple online account (to advertise their products) which will be linked to Gophrs existing booking platform to enable buyers to schedule same day delivery. Whilst other attempts have been made to deliver a similar model they are limited to select restaurants with more local initiatives prohibited by delivery costs. Next to a nationwide delivery network, in contrast, Gophrs established platform offers a level of automation in same-day delivery not currently available through any other solution from the scheduling of deliveries to route optimization, merging jobs at point-of-pick up and real time tracking -- all factors that enable a lower cost delivery model to be delivered.

Conceived as a solution to increase the competitiveness of independent retailers' development has been accelerated in response to COVID-19 and could play a key role in future economic recovery -- targeting two sectors which have been hit hardest by the pandemic -- small retail sector and taxi/private-hire industry.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Developing a Nature-Based Solutions Business Model for the Cosmetics Industry	£63,488	£63,488

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

Pilio will catalyse the disruption in the cosmetic supply chain due to COVID-19 to transition market leaders to conscious land management through directing the flow of investment to NbS. NbS are activities to protect/restore/manage natural and semi-natural ecosystems to address societal challenges (IUCN, 2020).

Our innovation is a SaaS platform combined with an innovative NbS project insetting finance model that enables industry leaders to identify/measure/transition to sourcing sustainably-produced raw materials.

Pilio will build economic and socio-ecological resilience within the cosmetic industry, with a specific focus on improving biodiversity in destructive crops (Cocoa Butter, Palm Oil and Patchouli).

In this project we will develop a set of NbS algorithms for palm, cocoa and patchouli supply chains. The algorithm will process global environmental data (eg. soil carbon, water regulation, nutrients); project data (metadata, baseline, impact of the intervention); and financial data (economic assessment of raw materials, cost benefit analysis of interventions). The resulting algorithm will form the basis of a decision making tool to choose projects based on cost and benefit, monitor their impact, and decide on their financing structure.

To develop the solution we are working with Lush Fresh Handmade Cosmetics, BSR, Mapshubs, Quick Start Consulting and expert advisors Dr. Bronson Griscom, Director Nature-based Solutions, Conservation International) and Dr. Mehjabeen (Sustainability advisor to L'Oreal Cosmetics).

Pilio is an environmental sustainability innovation software service company born out of the University of Oxford's Environmental Change Institute in 2011\). Pilio has successfully commercialised an energy and carbon management software as service platform to enable businesses to reduce their energy costs and carbon footprint. The team is led by a female founder, Catherine Bottrill, and supported by a diverse team of contributors.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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-H LTD	Integrating Artificial Intelligence to optimise the mitigation of Diesel Carbon Particulate Emissions from buses, HGV's and construction vehicles.	£99,912	£99,912

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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-H -- UK Diesel Engine Carbon Particulate Reduction AI System for Urban Environments.\*\***

As we emerge from COVID 19 and its devastating effects on both human life and the economy it is imperative that we turn our attention to ways in which we can improve the health of the UK population, through addressing the ever present global issue of air pollution particularly in urban environments.

Smart-H, a diverse British Company, is doing just that, by reducing carbon particulate emissions on **\*\*ANY\*\*** diesel engined vehicle by up to 10%!

### **\*\*Dirty Diesel\*\***

Buses, trucks and construction vehicles are our focus and world-wide they have one thing in common; they all have diesel engines running on diesel fuel, emitting copious amounts of exhaust fumes that generally contain carbon monoxide, carbon dioxide, nitrogen oxides, methane, hydro-carbon particulates and many other pollutants. These gases and particulates are created as the diesel fuel burns, and then are expelled from the diesel engine as exhaust fumes.

### **\*\*Serious Health Effects\*\***

The ultra fine particulates, 10 nanometers in diameter or smaller, are a threat to human health, because the body cannot protect itself against exposure to them. They can enter the heart and lungs through inhalation and have serious health effects, causing respiratory infections, heart disease, strokes and even cancer. It is those particulates that are our target. Our new product "The QuantumDrive AI Controller" works in symmetry with our existing proven Hydrogen technology and together will significantly reduce those ultra-fine particulates, thereby making the UK and the rest of the world a safer place to live and breathe!

### **\*\*Smart-H-Drive\*\***

Smart-H's existing technology, the HydroDrive, sits onboard the vehicle, produces Hydrogen and then injects it into the air intake of any diesel bus or HGV engine to reduce emissions significantly. In this new Innovate UK backed project we are developing an integrated AI advanced Smart-H-Drive controller (the QuantumDrive) to modulate between diesel engine efficiency, power and emissions and ultimately further improve emissions reduction in a typical urban drive-cycle.

Overall, this R&D project and the subsequent innovative product will help to further clean Britain's air, a necessity in the wake of COVID 19, which has left potentially, millions of people with respiratory difficulties, that are easily aggravated by harmful diesel particulates.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Kvatt	Kvatt - Eliminate waste from the parcel shipping industry	£98,381	£98,381

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

Kvatt is a packaging company focused on eliminating waste generated by the parcel shipping industry. Through reusable and protective technologies combined with an innovative business model, this project aims at developing a new system in which reusable packaging can thrive. The recent pandemic has reminded us just how important transport packaging has become in our lives. It plays an invisible but crucial role to the safe delivery of goods at our doorstep, yet, for decades it has been developed without any consideration for our planet.

At Kvatt, we want to disrupt packaging ownership and create a circular supply chain in which reusable packaging can truly evolve as a solution for the future. By understanding the complex system which regulates plastic management and innovating on current business models, our goal is to create new standards for transport packaging that are sustainable and economically viable. Opening a highway of opportunities for the development of new shipping 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LEAP MICRO AD LTD	SOURCE UK	£99,977	£99,977

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

COVID-19 has uncovered inherent weaknesses, inequities and system-wide risks in global food systems, increasing the urgency to foster pathways to greater food system sustainability and resilience. This project will address these challenges with a solution that simplifies supply chain logistics, strengthens local economies and boosts community resilience.

SOURCE UK is an advanced circular food system that combines food waste management with the production of nutrient-dense food using hydroponics and closed-loop recovery of nutrients, water and renewable energy. Current hydroponic practice predominantly uses energy-intensive synthetic fertilisers. Using AD by-products (biogas, recovered nutrients and CO<sub>2</sub>) will significantly decarbonise future hydroponics.

The approach extends food production into cities, processing organic waste on-site and yields locally grown food. On-site waste management and food production will generate green training and employment opportunities and divert organics from overburdened landfill sites.

The project will prototype the SOURCE UK AD and digestate management system, build an innovative circular business model, develop the service blueprint and evaluate stakeholder requirements. It will also assess SOURCE UK's potential social, economic and environmental impacts, working with external parties to base assumptions on real site-specific data and preparing the foundation for potential demonstrations at each site.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PHOTOFOXX LTD.	Revolutionizing Identity Verification through AI and Blockchain to make event entry COVID secure and fraud safe.	£99,729	£99,729

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 an unprecedented impact on the events industry in the UK and globally, bringing a £70BN industry (UK alone) to a standstill, putting over half a million jobs at risk in over 25,000 event businesses. This is a direct challenge caused purely by the COVID-19 pandemic.

A major bottleneck for events is around event entry and how to make this process, more COVID-19 safe, and more sustainable.

Most event entrance policies require a digital/paper ticket, ID and the payment method used from an attendee to allow entry. For these reasons, event entry is a hotspot for C-19 and a key reason why events have not been able to operate since the start of the pandemic. Additionally, it also does little to prevent ticket fraud, which pervades the industry.

Our project, Photofoxx Capsule will catapult event entry into a new era, where queues and manual checkpoints will be a thing of the past. The new type of event ticket we will make available, called a Zicket, will also prevent ticket fraud thanks to blockchain.

Photofoxx Capsule is a mobile app that acts as a personal, private facial recognition wallet, allowing consumers to verify their identity not just for events, but for any product or service that requires identify verification, without sending or sharing personal data. All data stays securely on a users mobile device. Thanks to this fund, we will focus on events to start with.

This solution is extremely scalable. Imagine NOT having to share confidential documents with a company and know that your personal data is safe on your phone, while still being able to get your identity verified? Welcome to data privacy like never before with our Anonymised plus Zero knowledge proof based solution.

In an event context, simply put, a user would:

1. Purchase an event ticket from the event website selecting a Photofoxx Capsule option (versus download/print/email options)
2. Open their capsule app to find your Zicket issued with your ID & Payment card details verified
3. Arrive on event day to walk past a Photofoxx camera to get automatically checked-in thanks to a pre-validated profile.

For attendees, the benefits include

1. Faster, greener, C-19 safe entry to physical events
2. Personal data stays on a users own device. No sensitive document sharing.
3. One App, multiple, cross category applications
4. One-Click, frictionless control over Zicket sharing with family, friends to invite them along for the event.
5. Highly anonymised design built in-house to provide privacy preservation on facial data storage & identification.

For events and businesses, there are numerous advantages:

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

1. C-19 safe event entry, more sustainable, with entry staff redeployed
2. Faster queues
3. Can still verify people wearing masks
4. Protects against fraud and ticket touts, with all resell data per ticket visible.
5. Control - Includes SMART Contracts that can simply prevent ticket resales/resales at higher prices.
6. Simplifies GDPR management

Photofoxx Capsule brings together facial recognition (AI) with blockchain networks with Smart Contracts for events, to provide a B2B2C solution that makes the advantages of these technologies readily accessible to 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 (GLOBAL) FUTURE FOREST COMPANY LTD	Biochar production from forest waste for a sustainable recovery from COVID 19	£96,439	£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 Future Forest Company is developing a project focusing on producing biochar from forest waste at scale and co-deploying it with reforestation to grow healthy forests that fight climate change. Biochar is a type of charcoal used as a soil amendment that can also sequester carbon. It is made from heating biomass in the absence of oxygen in a process called pyrolysis; the remaining substance is between 50-90% pure carbon that is stable in soil for hundreds of years. This process allows us to sequester carbon that would otherwise have been released back into the atmosphere if that forest waste was left to rot instead. Biochar also significantly reduces the amount of methane and nitrous oxide (other greenhouse gases) released from soil, giving a double benefit from a climate perspective as it is preventing them from being released. It also creates healthier forests; a recent review showed that applying biochar results in the improvement of soil physical, chemical, and microbial properties (Li et al, 2017).

The Future Forest Company buys degraded land, and reforests and restores it into an ancient landscape with super-charged carbon sequestration ability to fight climate change. We own over 2000 acres of land which we are currently re-planting. The beauty of biochar is that it can be co-deployed with reforestation to both sequester more carbon and increase the health of the soils in our forests.

We are building a continuous, high-volume biochar production system that is also modular to enable on-site processing. This will allow us to produce biochar out of excess forestry waste anywhere in the UK that would have been too expensive to transport anywhere else.

The world needs to move away from fossil fuels, but decarbonisation alone is unlikely to be enough to keep below the goal of 1.5 degrees of warming under the Paris agreement. To mitigate the worst effects of climate change we must actively remove carbon dioxide (CO<sub>2</sub>) from the atmosphere to a scale of 10-15 gigatonnes of CO<sub>2</sub>e annually, and both reforestation and biochar are on the IPCC's list of six negative emissions technologies that are capable of removing massive amounts of CO<sub>2</sub>. Reforestation could remove up to 3.6 gigatonnes of CO<sub>2</sub>e alone, and biochar could remove an extra 1.8 gigatonnes of CO<sub>2</sub>e annually.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DYCOTEC MATERIALS LTD	CONNECT: Novel All Copper Interconnect for Power Electronics Assembly	£96,052	£96,052

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

A novel all copper interconnect technology will be developed and demonstrated as an alternative to nanosilver die attach materials for semiconductor power devices such as Insulated-Gate Bipolar Transistors (IGBTs) and Metal-oxide-semiconductor field effect transistors (MOSFETs).

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
QUALPROS LTD.	EdTech application for live online training in mental well-being based on cognitive and behavioural modalities research	£87,522	£87,522

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

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

## Project description - provided by applicants

TheResilientMind.com is an online platform with a mobile application that enables expert psychologists to share their expertise in the form of a blend of live online consultations and tailored training based on behavioural analysis.

The web and mobile enabled platform is designed to enable psychologists and other expert practitioners to deliver tailored training to individuals looking to improve their mental well-being.

At present, psychologists looking to train virtually across a range of topics like conflict resolution, anxiety management and sleep improvement, to name a few, have to either build their own website or rely on a mix of licenced services in combination with a multitude of video conferencing solutions.

TheResilientMind.com solves this problem by providing all the necessary tools for psychologists to effectively provide access to high-quality and tailored training within the fewest number of steps.

The platform is an innovative approach to mental health training because it allows the practitioner to offer their expertise virtually and on-demand using a data led approach.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DOCTOR FLINT LIMITED	SPOT - The Safer Prescription of Opioids Tool - National Scale-up and Deployment	£68,376	£68,376

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

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

## Project description - provided by applicants

SPOT, The Safer Prescription of Opioids Tool, supports prescribers when relieving pain at the end-of-life. It has been featured in the BBC on TV and online, and it is currently in use in NHS Borders to support palliative care of patients.

The COVID19 pandemic is creating an increased demand for drugs (known as Opioids) that relieve pain at the end of life. This increased demand is in turn causing shortages of the first-line choices available for these drugs.

At the same time, doctors and nurses are being redeployed to work in unfamiliar environments and undertake new roles including an increasing amount of prescribing of opioids for pain and palliative care.

This puts the patients, and the doctors and nurses at risk of harm. There is a potential risk that prescribing these unfamiliar medicines in a new setting leads to an increased likelihood of overdosing a patient causing respiratory depression and possible death, or under-dosing the patient and the patient suffering.

We know that SPOT supports prescribers in using these medicines safely and that it has a role in reducing the risk to patients of harm.

The aim of this project is to make SPOT available to all prescribers in the UK on a free-to-use basis for the duration of the COVID19 pandemic and analyse the prescribing data to make sure that SPOT can best support doctors and nurses when they prescribe these vital drugs. We will approve SPOT for the FDA to export SPOT overseas and seek partnership with organisations in the USA and 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MAGDRIVE LTD	Magdrive Pulsed Power System for Advanced Satellite Propulsion	£99,999	£99,999

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

Magdrive is developing a revolutionary space propulsion system for small satellites. This system will operate with the high efficiency of electric propulsion while providing the high thrust advantage seen with chemical propulsion systems which still currently dominate the market. This allows for cheaper satellite launch through improved fuel efficiency, future-proofing satellite operators against legislation to enforce de-orbiting, and enable new mission types such as rendezvousing with larger satellites, constellation management, and operations in very low Earth orbit.

The small size of the Magdrive thruster will allow for small satellites to be used for significantly more applications, reducing the cost of space applications and the barriers to entry to this industry. As well as servicing the needs of established operators, this will allow smaller companies, start-ups and universities to conduct missions in space on smaller budgets, helping to drive UK innovation in space.

Magdrive has joined the European Space Agency Business Incubation Centre and has secured VC backing from Entrepreneur First.

Magdrive has reached a major milestone with the completion of its first component prototype. This has been possible thanks to a grant from the Westcott Business Incubation Centre. Magdrive has demonstrated the use of a miniaturised and compact pulsed power system to create the plasma for the Magdrive thruster. This plasma has been created in a vacuum and contained with magnetic fields generated by specifically designed magnetic coils.

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

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



## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OYSTER VENTURE PARTNERS LIMITED	An innovative all-in-one, cost-effective solution to enhancing the connection between innovators and investors in the Life Sciences and Healthcare Sectors.	£98,090	£98,090

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 David D'Alton and Rupert Lewis, Oyster Venture Partners Ltd is a rapidly growing British SME in the life sciences and healthcare sector. It aims to achieve near-total automation of the previously cumbersome and wasteful process of connecting innovators with suitable investors in this field. Offering backgrounds in finance, healthcare consultancy, investment and software development, the founders of this team aim to break into a revenue of £5m in Year 5 post-project.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
STEADYPAY LIMITED	Transaction-based credit risk engine, enabling sustainable and socially responsible lending to segments of the economy whose vulnerability has been exposed and exacerbated by COVID-19.	£97,154	£97,154

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

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

## Project description - provided by applicants

SteadyPay is a UK technology company, focused on understanding the needs of those paid by the hour or task (gig economy workers), immigrants, millennials and younger people just starting - and enabling fair financial solutions that change their lives for the better.

SteadyPay is developing the next generation credit risk engine that uses artificial intelligence and machine learning technology to combine big data sources and identify trustworthy behavioural patterns.

This will enable SteadyPay as well as 3rd part financial institutions (banks, alternative lenders) to produce a deep and dynamic trust profile on what would previously be considered a thin or no-file borrower. This, in turn, will improve access to affordable and sustainable credit for segments of the economy that have been hit hard by COVID-19, like gig economy 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
DROPL LIMITED	Drop Cryptocurrency for Good	£99,955	£99,955

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

Mitigation of harmful carbon release as a consequence of cryptocurrency mining by the implementation of an ethical computational reward scheme.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HOMYZE LIMITED	An Innovative System for Identifying Office Cleaning Needs and Supplying Cleaning Services That Will Significantly Reduce Risk of Workplace Infection.	£94,466	£94,466

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 COVID-19 period of reduced in-office staffs, traditional contract cleaning services are not financially viable for companies. Workplaces are generally underused, making recurring cleaning of all spaces is not warranted. Further, as employees begin to return to work, they will want to feel confident that their workspaces are clean and sanitised. Homyze, founded by Adam Edgell-Bush, Andrew Jaques, Michael O'Keefe and Ian Warner, aims to develop a computer-aided facilities management program and associated presence-detecting sensors to identify utilised workplace areas to schedule when and where cleaning services occur. This innovative and sustainable solution will allow companies to pay just for the cleaning services they need while prioritising employee safety as the economy returns to the workplace.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACT 2 TRANSFORM LTD	Discovery 2 Recovery – Business Analysis Tool Development	£75,362	£75,362

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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\*\***

Many UK SME's are struggling to survive and some have ceased trading as a consequence of not being able to develop and enact effective contingency plans to cope with the impact of Covid-19 on their operations.

To confirm this, we conducted a series of surveys backed up with interviews with SME business owners. We found that:

\\* at the start of lockdown 93% of small businesses did not have a plan that could act as a 'route map' and inform their decision making and how to cope with changing circumstances

\\* those businesses that developed an effective plan remained viable as of July 2020

\\* some of those businesses that failed to plan for and accommodate restrictions have now ceased trading.

### **\*\*What are the objectives?\*\***

To conduct novel R&D to create a new business modelling, analysis and planning tools to enable businesses to sustainably recover from the impacts of Covid-19 and the continue to prosper

### **\*\*What research and development will we undertake?\*\***

Through the combined use of polling, facilitated virtual workshops and 1-2-1 interviews we will research the factors, actions and omissions that determine the difference between businesses that have bounced back and those that continue to struggle.

We will develop a new business modelling system and associated algorithms which will analyse complex interactions between factors affecting how well businesses can sustainably recover from the impacts of Covid-19 and adapt to possible changing internal and external circumstances.

Ideally by the end of the project we hope to have a market-ready product. However, with innovation comes risk. We expect, at least, to have created and fully tested a beta version prototype of the new Covid-19 Sustainable Recovery Tool comprising a versatile and adaptable 'branching' questionnaire, business analysis programme and resulting customer reports.

### **\*\*How and why is this innovative?\*\***

The current state of the art currently only acts as a triage tool for accredited consultants. The R&D will result in a new way of analysing business capabilities to reveal and help mitigate hidden issues that nevertheless exist and act to block or severely inhibit the ability of SMEs to recover and plan for the new

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IMPACT GLOBAL EMISSION SOLUTIONS LIMITED	Development of an Energy Efficient Water Purification System, Which Significantly Reduces the Need for Chemicals	£98,004	£98,004

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

IGES specialises in industrial water purification. Currently, the available processes rely heavily on chemicals to remove pollutants from water. This project will create a water treatment process which will be energy-efficient, less reliant on chemicals, and help to reduce both capital expenditure and operational costs. The solution will enable water companies in the UK to meet their regulatory standards and to improve their environmental sustainability. There is potentially a global market for improved water purification processes which are economically viable and environmentally friendly. The project will help position the UK as a leader in developing these processes.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CO2-ZERO LTD	Preparation of bulk samples to test large scale carbon capture using olivine.	£89,418	£89,418

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 essentially emitted too much carbon dioxide already, and the most feasible pathways to stay 'well below' two degrees all require removing carbon\_ \_dioxide from the atmosphere at an unprecedented scale\_", Glen Peters, Center for International Climate Research, Norway.

CO2-Zero is partnering with Grinding Solutions of Truro, Cornwall to focus on the removal of carbon dioxide ("CO2") from the atmosphere by using minerals such as olivine that permanently capture CO2 through natural weathering.

This widely occurring mineral binds CO2 chemically and has helped keep worldwide levels of CO2 in balance for millions of years. Contact with the air or water results in a harmless bicarbonate that permanently captures CO2 at a ratio of up to 1 : 1.2 meaning 1 tonne Olivine sequesters about 1.2 tonnes of CO2\.

Millions of tonnes of Olivine can be quarried or mined every year, which we can process in a simple safe manner and permanently remove huge amounts of CO2 from the air. The science is clearly understood but nobody has moved to commercialise it yet. It is unknown to the public and the investing community.

Other greenhouse gas removal methods include forestation, agricultural practices that sequester carbon in soils, bio-energy with carbon capture and storage ("BECCS"), ocean de-acidification, and direct air capture combined with storage.

Our enhanced weathering will permanently capture CO2 at the lowest cost and with minimal environmental impact.

In the next decade, permanent carbon capture will grow to become an enormous multi-billion \$ industry.

"\_Every CO? molecule taken out of the atmosphere and stored safely in the ground has an immediate cooling effect - while every additionally emitted CO? molecule\_ \_increases warming for decades\_", Dirk Paessler, Carbon Drawdown Initiative Carbdownd GmbH.

CO2-Zero and their British subcontracting partners (Grinding Solutions, Petrolab UK and Eriez Magnetics Europe) will be working with world experts at University College London ("UCL") and to make the UK a leader in carbon capture technologies.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
JURALIO LTD	Legal dispute management platform	£99,991	£99,991

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 lawtech experimental development project to prototype and pilot a highly scaleable legal dispute management and collaboration platform which will be attractive to neutral decision makers and facilitators (e.g. arbitrators, judges, adjudicators, mediators) as well as to disputants, lawyers and their clients. It extends our existing legal case management and collaboration platform which is focused on lawyers and their clients.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SHIP SHAPE SEARCH LTD	A platform that helps startups find the right investors	£99,667	£99,667

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 democratise Venture Capital (VC) funding for Small and Medium-Sized Enterprises (SMEs) across the UK.

\* It takes an SME 6-9 months to secure VC funding.

\* Weeks are spent by SME management trying to identify suitable investors.

\* VC funding makes up 15% of all UK SME finance, however, the process to succeed in securing funding is opaque, and success rates for all SMEs are low, especially for founders from diverse backgrounds or outside of London and the South East.

This project will create an online platform for UK startups/SMEs that enables them to find the right potential investors without the need to engage expensive professionals or data platforms that are built for investors. Regardless of region or founder background, SMEs will be able to identify suitable investors to approach.

This project will utilise cutting edge technology to analyse information to deliver weeks of time and thousands of pounds in savings for SMEs in their VC fundraising process, opening up the possibility of Venture Capital funding for more UK SMEs.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FORESTREET LTD	Application of Data Science to Transform the Effectiveness of Technology Scouting	£95,480	£95,480

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

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

### Project description - provided by applicants

Forestreet have developed a production line of analytical processes that allow them to map emerging technology providers against a use-case more effectively than any existing provider. The current process relies on a degree of human supervision that means each study is a unique commission. That constraint limits the current client base to major blue-chip companies who can afford to invest in bespoke research. The planned research and development is to enhance the data science and data engineering capability so that it can be delivered as a low -cost, high volume subscription, thereby transforming the access of UK SME's to world-class technology research.

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

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INTELLIGENT OMICS LIMITED	Evaluation of an In silico pipeline for drug discovery – a sustainable alternative model to laboratory based – drug discovery without borders.	£99,720	£99,720

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

Drug discovery is an expensive, time consuming, and unsustainable process requiring large teams, significant use of animal models, and extensive physical laboratory resources. The process is also prone to failure because many of the methods used are unrepresentative of the disease state or organism being targeted. Despite the significant investment of biological, technical, and financial resources into the High Throughput Screening (HTS) process, the drop off rate is high with few contenders even reaching trials in human subjects. This resource requirement has meant that drug discovery has been significantly impacted by the COVID-19 pandemic and subsequent lockdown of laboratory staff. We believe there is an alternative to this process using computer-based artificial intelligence-driven approaches here termed biologically driven In silico high throughput screening and drug discovery.

With the MDC we are constructing a drug discovery pipeline based on existing artificial Intelligence in silico (computer-based) tools. These will be utilised in this project to identify alternative druggable targets for the KRas related pathway in lung cancer. This will be achieved through the application of the pipeline to high dimensional molecular data (transcriptomic) for lung cancer held in public repositories. We aim to identify a number of druggable contenders and associated small molecule-based compounds that can target these. We also will seek to validate the biological relevance of these through rapid automated cell line validation.

The validation of this process will provide an alternative cost-effective sustainable approach to drug discovery which can be used with minimal resource constraints, reduced environmental impact, reduced costs, reduced use of animals, and human disease targeting. Thus we will circumvent many of the limitations of current HTS approaches. This will open up further opportunities for new cost-effective drug discovery allowing drugs to be developed in areas where there has traditionally been a lack of investment, such as rare or orphaned diseases.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CREVENTA GROUP LTD	Creventa - A simple to use web ordering system to minimise contact in restaurants, pubs & bars	£92,612	£92,612

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 restaurant solution to ordering with \*\*minimal touch\*\*, without having to download an app or use physical menus. this reduces risk and cost for both parties.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Magneto Poppets	£99,505	£99,505

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

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

## Project description - provided by applicants

Some supercars like the \_Koenigsegg Gemera\_ exploit controlled valve actuation systems to enable the engine to open its valves at different times during the engine cycle (or not at all) depending on the running condition. In effect, the \_Magneto-Poppets\_ project aims to achieve what the Koenigsegg cars achieve -- at about one hundredth of the cost and with significantly lower losses.

In the (non-electric) car industry, the term \_variable valve timing\_ (VVT) describes what internal combustion engine (ICE) manufacturers desperately want to achieve -- the capability to open and close poppet valves at different points in the engine cycle depending on the running condition at the time.

The \_Magneto-Poppets\_ project will develop and prove a new approach to the control of poppet valves - valves that open and close at very high rates to control the flows of gases. The most common present-day use for poppet valves is in ICEs where these valves can often be opening and closing over 50 times within a second - or more. There are other applications.

The main motivating application here is a class of machines for performing energy storage. Compressed air energy storage (CAES) and pumped thermal energy storage (PTES) systems both rely on efficient compression and expansion of gas and ex-service truck engines to provide an extremely low-cost base from which to develop these. ICEs compress and expand gas in the same device so it is not surprising that the same basic valve action should be relevant in compressors, expanders and engines.

What poppet valves must do is simple to describe - but rather more difficult to engineer. These valves must toggle between the "open" and "closed" states. Invariably, the valve holds position for a while in one state before transiting to the other. Shorter transits are always preferable for good machine performance. The vast majority of all poppet valves are opened by cams (non-circular shapes fixed onto shafts) and closed again by stiff return springs. Cam action causes very substantial losses in friction. Despite this, most production car engines with any VVT capability still use cams.

In theory, there are numerous possible alternatives to cam-driven poppet valves. However matching the performance of cams is very difficult because the accelerations are so high. One valve might have to transit a 5mm distance in <1 milli-second (one thousandth of a second). The peak acceleration required for this is  $>2,000g$ . No direct electrical actuation comes close to achieving this.

The solution developed by Cheesecake Energy Ltd (CEL) emerges from looking at the problem a different way around. Instead of wondering how we can possibly accelerate the valve mass at such high rates, CEL instead considered how we can "grab" the valve mass at one extreme of motion prior to releasing it again at a controllable time. Between release on one side and catch on the other side, the valve is in free flight -- accelerated and then decelerated by a simple spring. CEL's magnetic latch design handles the rest.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CLYTELL (UK) LIMITED	AI-enabled Decarbonisation Assessment Score and Analytics for Net-Zero Construction Operations (AI-DASA)	£99,400	£99,400

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

Drawing on a philosophical standpoint of "to measure is to know, if you cannot measure it you cannot improve it", the partners will leverage Artificial Intelligence (AI) and data economy to develop a "first of its kind" decarbonisation scoring and analytics system for the construction industry. The platform will aid the decarbonisation of construction processes by assessing and scoring the level of compliance of project designs and building processes. The system will consist of two modules namely:

1. Decarbonisation Assessment Scoring Platform (DASP): DASP will assess the construction operational carbon and assign a decarbonisation score (DECARB-SCORE) based on the level of decarbonisation compliance of the design and construction processes. DASP will employ state-of-art AI models that will be developed using carbon datasheet of materials, historical building design files (BIM files) and construction sites' operational information (sources of energy, equipment/machinery power efficiency, etc.). The decarbonisation compliance will be graded with appropriate colour-coded compliance levels.
2. Decarbonisation Analytics Platform (DECARBONALYTICS): The DECARBONALYTICS platform will use advanced deep learning techniques and heuristic optimisation algorithms to conduct what/if analysis of the combination of alternative building designs, constituent materials and site operational conditions. This analysis will yield multiple scenarios with varying DECARB-SCOREs which will enable actionable insights based on the desired level of decarbonisation compliance and the associated affordability.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Kooling Technologies Limited	LOCALKOOL Digitises the UK High-Street: Supporting Local Retailers and the Environment	£95,105	£95,105

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

COVID-19 considerably boosted e-commerce and home deliveries of goods, bringing growth for large retailers and smaller retailers with advanced digital capabilities. High-street businesses and small local retailers however suffered and are still suffering huge losses. Given that this behavioural shift will partially carry on after a COVID-19 vaccine is found, the outlook for SME retailers is bleak.

Mass-scale home deliveries come with a significant carbon footprint, particularly in cities due to last mile delivery vehicles emitting not only gases harmful to the climate, but also to human health. According to several studies, air pollution is a factor that favours the spread of COVID-19.

We develop a SaaS platform to enable retailers to access a consolidated Ultra Low Emissions (ULE) last-mile logistics services supply. The platform automatically matches logistics providers with parcel delivery jobs to optimize speed and cost per geographical region, parcel type, distance and delivery job preferences. Stakeholders can access the platform through API, web and mobile interface. Consumers expecting a delivery can track its drivers' geolocation in real-time through an interactive map.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RENEWABLE HEAT & POWER LIMITED	Equilibrium Energy Storage	£52,742	£52,742

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 application relates to project funding for the next phase of the development of a commercially viable form of storing electricity both at intermediate scale, improving the utility of intermittent renewable energy sources such as solar and wind, and at grid distribution level. This innovative technology, called Equilibrium Energy Storage (ESS), is entirely new and differs significantly from existing methods of storing electrical energy.

This project directly addresses the decarbonisation of the electricity grid and offers huge global market potential, a market estimated to be worth \$30 billion by 2023, helping the UK lead the world in grid-scale energy storage technology.

Approximately **\*\*95%\*\*** of all grid scale electricity storage worldwide takes the form of pumped storage hydropower. However, high capital cost of construction and inherent efficiency losses mean that the three systems in the UK are purely operated as STOR (short term operational reserve) in the event of black outs at conventional power stations rather than on a regular basis. In addition, two large lithium ion battery facilities have been built to assist in voltage and frequency stabilization.

The EES system applies the same principles of hydroelectric pumped storage but utilises an alternative method of generating pressure, replacing the hydraulic head in a conventional system. Within the EES system water is discharged at high velocity via a standard Pelton turbine mounted on a generator to create electricity. The water is then pumped back into a pressure vessel to recharge the system.

The advantages of the EES system over current storage technologies are:

1. Not being geographically restricted and could be built near required grid locations with low environmental impact.
2. Fully scalable (from say 100kWh to 1,000MWh), and units could be built relatively quickly.
3. The amount of energy stored remains constant over time and does not reduce like batteries.
4. The lifetime of systems should be 50 -- 75 years compared with only a few years for Lithium Ion battery storage.
5. The storage cycle is inherently more efficient than traditional pumped storage.
6. No exotic or rare metals or compounds are required.
7. It uses standard "off-the shelf" components e.g. generators, centrifugal pumps, a Pelton turbine, heat pumps etc.

A small laboratory-scale system has been built over the past two years near Exeter University. To date, no engineering or technical issues have been identified that might prevent the technology from operating as designed.

Note: you can see all Innovate UK-funded projects 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 purpose of the funding would be to: -

- \\*Produce independently verified performance data on the system.
- \\*Design and install the computerised control gear to monitor and operate the system.
- \\*Secure a Patent to cover all non-public domain aspects of the design.
- \\*Design a commercial scale fully operational prototype.

The funding will enable us to develop the concept to a point where the technology is suitable for commercial development in conjunction with the National Grid and/or a larger UK-based company working 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
RYPE OFFICE LTD	Reducing the cost of circular economy office chairs	£98,487	£98,487

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

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

## Project description - provided by applicants

Every year in the UK, 75,000 tonnes of office furniture goes to landfill, a figure that will increase as a result of COVID-19. At the same time furniture made from virgin resources overseas is creating substantial greenhouse gas emissions ([research][0] shows that, over a commercial building's 40 year life, office furniture is the single biggest source of greenhouse gas emissions), harming biodiversity and taking jobs out of the country.

Type Office is a circular economy office furniture company, which remanufactures office furniture to as-new condition using quality-controlled engineering processes. This project will enable us to conduct experimental development of equipment for office furniture disassembly. The immaturity of the office furniture remanufacturing industry means that no equipment has been developed to non-destructively, safely and efficiently disassemble office furniture.

The experimental development of this equipment and associated processes will reduce the costs of remanufacturing so that our circular economy remanufactured chairs will be able to compete on price with low quality unsustainable imports.

The result will be substantial savings in greenhouse gas emissions (remanufactured office furniture has 80% less embodied carbon than furniture made from virgin resources), reduced waste, UK jobs, improved national balance of payments and help the UK to demonstrate global leadership in the circular economy.

[0]: [https://www.academia.edu/18481731/Embodied\\_energy\\_analysis\\_of\\_fixtures\\_fittings\\_and\\_furniture\\_in\\_office\\_buildings](https://www.academia.edu/18481731/Embodied_energy_analysis_of_fixtures_fittings_and_furniture_in_office_buildings)

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
TEFOGO LTD	Competency Passport	£96,238	£96,238

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 people are very aware that COVID-19 has put a huge burden on doctors and nurses, below the surface the business of healthcare itself has been severely disrupted, with many traditional ways of working no longer possible.

The particular challenge we are focussed on solving is nurses being asked to rapidly deal with new types of patients and conditions, in new clinical environments -- including direct care of COVID-19 patients, cross-covering wards due to isolation wards being setup, and recovering from the disruption to the normal flow of patients. New flexibility is being asked of the clinical workforce, including student nurses starting clinical work early (with competencies still to be assessed) and nurses who had left the workforce temporarily returning needing to have their competencies rapidly re-assessed. Entire new organisations (Nightingale Hospitals) and departments (COVID-19 surge wards) are being stood-up without the traditional infrastructure in place to support them.

In developing the Competency Passport, we will enable front-line nurses to digitally record and transfer clinical competencies across different organisations and care settings.

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

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

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	GreenTech3D - New Generation Green Technology for Post-Processing of 3D Printed Parts	£87,239	£87,239

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 geopolitical uncertainties are bringing significant changes into the global manufacturing, logistics and free trade. This has increased uptake of the on-demand 3D printing manufacturing in UK, USA and Europe, especially for the manufacture of medical articles, Covid-19 testing devices, PPE and personal accessories \[Nature, \_The global rise of 3D printing during the COVID-19 pandemic, 12 August 2020\].\_

3D printing offers the capability to rapidly create 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 faster for the local hospitals and institutions to receive specialised parts by 3D printing them at the point of use rather than from the central government. Nationwide, there are many 3D printing systems both in commercial and academic capacity and this resource must be utilised.

Due to the layer-by-layer nature of 3D printing, the printed articles result in rough, powdery and porous surfaces. This causes the accumulation and growth of bacteria, fungi and increases the risk of the loose polymer particles attacking the respiratory system as noted by the World Health Organisation (WHO) and FDA guidelines for 3D printing. This issue prevents any further use of 3D printed articles for oral/respiratory medical purposes.

Current methods for the post-processing of 3D printed surfaces involve mechanical abrasion techniques, that do not seal the surface and create polymer micro-fibres that can attack the respiratory system. Furthermore, these methods discharge hundreds of litres of micro-plastic polluted freshwater. Therefore, current post-processing techniques are not adequate for the smoothing of articles to be used for medical respiratory purposes. Fully green and sustainable post-processing technology would provide a massive boost to the general adoption of industrial 3D printing in medical market.

Additive Manufacturing Technologies (AMT), a Sheffield-based developer and manufacturer of smart Additive Manufacturing systems, has developed a new generation green technology to be used in its vapour-based BLAST smoothing process.

The adaptation of such technology would replace traditionally pollutant post-processing methods thus increasing the sustainability and environmental factor in the whole 3D printing process cycle. This follows multiple announcements, policy changes and numerous grants for the industry to move towards clean sustainable technologies and replace old polluting equipment.

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

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PAUA TECH LIMITED	Paua - Electric Fuel Card	£95,268	£95,268

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

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Paua Electric Fuel Card will assess business models for an 'all-electric fuel card' for fleets and business drivers. We are seeking to free fleets from depot only charging and enable a greater proportion of their fleet to accelerate the transition to low carbon transport.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Ecodisco Ltd	Innovative Deposit Return Scheme and reusable HipCup system to improve sustainability and resilience in venues and clubs in the UK	£50,059	£50,059

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Project description - provided by applicants

ECODISCO has created a new reusable cup scheme for venues and clubs to support the sustainable recovery of the night-life economy.

The night-life economy contributes 6% to the GDP of the UK economy annually, yet very little has been done to reduce the industry's environmental impacts and improve its unnecessary appetite for waste. On average, 85m people attend live events in the UK annually and this results in over 100 million single-use plastic cups being wasted

With the support of IUK, ECODISCO will create HipCup. HipCup is a reusable cup with low embedded energy, which will last a minimum of 300 washes. It is designed for the unique challenges of venues: usability and durability. Consumers can attach their cup to their belt, clothes or bag to keep safe before returning it to the bar to swap in for a clean replacement for their next beverage.

HipCup will also design and test a DRS/levy scheme for reusable cups. ECODISCO will supply, collect, clean and return reusable cups weighted to the capacity of the venue. This overcomes the pain points of storing, cleaning and drying reusable cups in-venue. ECODISCO removes all of the effort to transition to reusable cups, which frequently drive venues to use single-use plastic cups. This project incorporates a real-world pilot with Central London venues.

As the night-life economy recovers from COVID-19, ECODISCO will be a proponent of building back the industry with a pain-free and low-costs sustainable solution to reduce waste. Acting now prevents a 'back to business' attitude that prolongs unsustainable, wasteful behaviours.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PENNY BLACK COFFEE LTD	Biofuel Powered Coffee Roaster	£100,000	£100,000

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

The project involves testing the use of bio-fuels as a heat source to roast coffee.

We will refurbish a diesel heat recirculation roaster (which we already own) for the investigation. The heat recirculation ducting sends heat back through the furnace. This acts as an after-burner, and combusts particulates, giving smokeless emissions. Recirculation of heat greatly reduces fuel consumption required for roasting.

First we will test filtered 'waste cooking oil'. There is potential to build a circular economy relationship with our customers, who will exchange waste cooking oil for discounted coffee when we deliver to them.

The second fuel we plan to test is bio-fuel that is 'extracted from coffee grounds (using hexane). There is a potential to collect grounds from our customers to transform into bio-fuel.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 SurgiCare - Delivering Safe Surgical Care	£99,585	£99,585

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

Pathpoint SurgiCare is a digital solution to tackle the surgery waiting list backlog resulting from the drastic service interruption brought about by COVID-19. The software captures and communicates all the relevant information required to prioritise patients for surgery; from pre-admission tests to post-discharge review and rehabilitation.

Using cloud technology- accessible via any web browser- healthcare staff and patients can engage in clinical assessments remotely, assured that data is shared safely and securely, avoiding repetition of work and providing an audit trail at every intervention. The progression of patients through the pathway care is visible to all caregivers: at home, on the ward, in the operating room.

Digital communication tools to assess and review surgical treatment allows patients to receive the highest standard of care without physically entering the hospital for routine pre- and post-op care. This means that appointments can continue without extensive time taken off work, preventing traffic congestion, and minimising key worker coronavirus exposure. With an estimated monthly backlog of 400,000 patients, the combined economic, carbon and infection impacts are massive.

Open Medical are the team behind Pathpoint SurgiCare, bringing expertise from orthopaedic trauma management into a new research and development proposal. Perioperative care is a catch-all term for a complex chain of events that begins well before a patient enters hospital and continues long after a patient is discharged. At each stage of assessment and follow-up any number of clinical tests may be administered, medications prescribed, and exercises recommended. Such interventions typically require coordination between a range of healthcare professionals, from doctors and nurses, to pharmacists and physiotherapists. Pathpoint SurgiCare places the patient-clinician relationship at the centre of a smart, accessible software platform ensuring that all the information needed to carry out each step successfully is always available. The software is compatible with existing hospital systems, and uses sophisticated data coding that ensures uniformity of standards across all patient treatments.

The surgical waiting list backlog caused by COVID-19 is an emergency situation in its own right. Any second wave and future lockdown measures can not allow disruption to vital surgical services, often critical in the treatment of conditions such as cancer. Pathpoint SurgiCare is an effective solution to triage those patients most urgently in need of surgery if any such disruption arises again whilst simultaneously providing a structured workflow to ensure that care is delivered in a timely and efficient manner coupled with vigilant post-operative monitoring.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PACLA MEDICAL LIMITED	Development of interactive, personalised App-operated back care robot prototype	£86,903	£86,903

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

Have you ever had a sore back or known someone who had one? If so, that's not surprising: "low back pain \[is\] the single leading cause of disability globally" according to the WHO and Public Health England [found in 2018][0] that "low back and neck pain was the leading cause of level 3 morbidity for males and females." We're addressing the disruptive impact of COVID-19 on access to manual physiotherapy for people with back pain, due to the requirement for close human contact during manual treatment which results in a high risk of infection. Our aim is to make personalised back care widely and above all safely available to all, regardless of race, colour, ethnicity, religion, gender, sexual orientation or age.

Your back is different, everyone's back is different. That's why if you visit the physiotherapist with a back issue they will always carry out a detailed consultation. Our new technology will automate this crucial component of manual therapy using in-App consultation to interact with users and enable personalised treatment to be delivered by a robot. The founder of the company is a trained engineer and physiotherapist. Incorporating his physiotherapeutic know-how, our software will analyse the user's responses to offer over 10,000 different personalised treatment programmes, delivered by a robot controlled by the App. Our solution will deliver personalised, safe and effective therapy in the home. Our offering will provide as many sessions as users need for a monthly cost of around one manual physiotherapy session - making the regular treatment needed by those with chronic back pain affordable.

We are a diverse team with the skills in project management, engineering, financial planning and software to make this project come in on budget and be a success.

We believe our obtainable market is 33m people and £19.4bn annual revenue globally, including 2m people and £1.2bn revenue in the UK and 9.7m people and £5.7bn revenue in the USA. We target £26.6m revenue by 2026 and plan to create 49 highly paid, skilled jobs in the UK three years after completing our project. Our long term ambition is to be the leading back care company in the world, making interactive, personalised, high quality, affordable and safe back care available across the world.

[0]: <https://www.gov.uk/government/publications/health-profile-for-england-2018/chapter-3-trends-in-morbidity-and-risk-factors#trends-in-morbidity-by-disease-group>

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Enewable Limited	A incentive-led app to enable users to reduce their environmental impacts	£99,349	£99,349

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 develop a mobile telephone-based app that uses active and passive data collection to incentivise users to take action to reduce their environmental impact.

Its ultimate goal is the reduction of humanity's negative influences on the environment.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
WEBIGENCE LIMITED	Spark travel management system for luxury tour operators	£98,619	£98,619

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Spark travel management system for luxury tour operators

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PROJECTPAY LTD	Digitalisation of construction payment process to protect project funds and guarantee fast payments for everyone in the supply chain. Pilot program with UK builder supported.	£100,000	£100,000

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

**\*\*ProjectPay's innovative project owner funding and contractor payment approach helps SME businesses transition back into a situation where they can pay for their employee's wages out of their income by ensuring government building stimulus funds are directly paid against works completed by all contractors in the supply chain.\*\***

ProjectPay addresses two of the biggest problems the building and construction industry has faced for decades that urgently need to be solved to ensure that government construction stimulus, new build and renovation project funds are paid against contracts for works and released immediately against approved invoices without the need for credit checks, directors guarantees or any interest charges. Protecting users from contractor insolvencies and ensuring businesses have the cash flow to pay employees and suppliers to complete projects.

ProjectPay's proprietary technology platform enables the use of cascading accounts without any additional administration or compliance burden to ensure funds are protected against business insolvency. The ProjectPay solution includes the more sophisticated elements missing from PBAs (Project Bank Accounts) by providing the tools for tracking claims and variations to ensure that funds held get paid to the right people once certain criteria are met, allowing users to exchange information about claims to manage tracking approvals, holding funds and releasing or withholding them based on particular triggers (e.g. a dispute). Whilst standardising contracts and subcontracts and ensuring compliance to UK payment laws. By deploying technology to remove the payment risk we are able to offer a 'buy now, pay later' or in this case a 'build or renovate now, pay later' offer which has wide appeal to provide quick, easy access to funds to maximise government stimulus spending in the sector.

**\*\*About ProjectPay\*\*:**

**\*\*We created a solution for a BIG problem...\*\***

For decades, the Government and the building and construction industry has been looking to solve the HUGE problem of project payments.

According to the Office for National Statistics in 2018 "the construction sector made up 3,202 insolvencies, which is the highest of any sector in 2018 and a 14.7% increase on the 2,792 insolvencies seen in 2017". Billions of pounds remains unpaid to small businesses that have done work and never been paid because the builder's business has collapsed without paying their trade subcontractors who did the work. Sadly, as we see all too often in the media, it's project owners who are left high and dry. Overnight they find their project funds have disappeared due to either builder collapse or shonky business practises.

ProjectPay Platform is the new way to manage all building project payments (big or small).

It's safe, simple and secure. ProjectPay Platform uses proprietary digital technologies that guarantees small businesses and trade contractors are paid, fast, for the work they've done -- because that's the way it should be.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FRENO BRAKES LTD	Project Quickstop	£99,902	£99,902

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 both automotive and aerospace industries. At the same time, both industries face enormous pressure to meet legislative targets for improved sustainability. In automotive, reduced vehicle weight is needed in order to reduce emissions in both internal combustion engine (ICE) and electric or hybrid powertrain systems. This proposal addresses the opportunity to contribute to lightweighting by replacing cast iron brake materials with low density value-engineered carbon-carbon materials. Cast iron brakes are used in volume automotive and replacing with low density carbon-carbon brakes can realize >70% weight savings leading to combined performance improvement and emissions reduction. Replacing the brakes in the current fleet of ICE vehicles in the UK would reduce CO2 emissions by 2 million tonnes per year (about 0.5% of total UK emissions). Furthermore, the material microstructure is engineered to deliver extremely low wear rates compared to conventional carbon-carbon materials as used in the aviation industry.

The carbon-carbon materials being developed by Freno Carbon use novel and low cost process technology which allows a projected price of a Quickstop brake disk comparable to cast iron, the current choice for cars and light vans, on a cost to weight basis.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Hivemap LTD	The application of Artificial Intelligence to enhance the interpretation of project management data, reduce risks and costs whilst driving efficiency improvements in the construction industry	£95,949	£95,949

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Hivemap is a UK-based SME developing artificial intelligence software for the construction industry. Construction project managers are inundated with data and make complex decisions daily, but it is difficult to apply the wealth of project information to make the right decisions. Hivemap is a data-science-as-service software platform that will use artificial intelligence to anticipate problems early enough to prevent wasteful and costly mistakes. Data will be collated from many sources and presented visually. This will improve the percentage of construction projects completed on time and within budget; it will also have significant environmental 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 MATTER DATA LIMITED	A revolutionary AI Driven Workplace Anti-Bully System, Predicting, Or Reporting Incidents Through Machine Learning	£99,986	£99,986

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Matthew Barnett and Andrew Church, DarkMatter is a UK-based SME that intends to address the current challenges in delivering anti-bully and harassment strategies in the increasing environment of homeworking. Offering backgrounds in IT consultancy, Big Data NLP and ML, and Wellbeing Programmes, the founders of this project propose to develop a machine learning product, which intends to reduce bullying and harassment, and utilise natural language processing. This project could improve employee wellbeing on a wide scale and support organisations' responsibility to address issues of inequality and discrimination. DarkMatter anticipates a Year-5 post-project revenue of £5.1M.

### **\*\*Scope/Summary\*\***

Current approaches to anti-bully and harassment prevention are, in many cases, not digitalised and not equipped to address employee needs in the increased landscape of homeworking. DarkMatter's software will address this issue by using NLP to analyse employees' behaviour and flag when safeguarding and/or wellbeing is being impeded.

### **\*\*Innovation and EDI Considerations\*\***

DarkMatter's remote worker/learner bullying and harassment software offers an ethically-focused listening application to standard PCs, which harvests and securely transmits written/spoken data to its advanced analytics platform. Due to the sensitivity of the data sourced, this is hosted on secure on-premise infrastructure. The development of NLP, Neural Networks, and Machine Learning models, at a depth that was previously unavailable, has ensured the development of a solution that vectors keywords and phrases. Employee sentiments and emotions can be classified against a bullying and harassment behavioural baseline, and subsequently providing an automated alerting where a concern is flagged. In addition, team level behavioural patterns may be mapped and analysed over time to identify abnormalities relating to the inclusion and consistency of communication with specific individuals.

There are no identified potential or inadvertent racial/ethnic/gender biases within our proposal that could negatively affect any one gender or ethnic group. This will continue to be monitored throughout the project.

### **\*\*Market Opportunity and Sustainability\*\***

Work-related bullying and harassment are reaching epidemic levels. There is currently no solution to holistically monitor and safeguard remote working teams against either. DarkMatter's innovation will be first to market.

DarkMatter's innovation will help to maintain the heightened levels of remote working and, consequently, reduce the need for business travel and its associated carbon footprint.

The global and UK annual addressable/serviceable markets are £818.28M/£818.28M and £145M/£50M, respectively (CAGR: 7.1% 2019-2027; The Insight Partners).

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE TECHNOLOGY RESEARCH CENTRE LIMITED	A novel AI machine learning tool to maximise productivity and profitability for plastics recyclers and improve commercial viability of currently unrecyclable, low grade recovered polymer; reducing plastic waste by 283kt/annum and emissions by 870kt/annum.	£99,360	£99,360

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 current Covid pandemic, plastics are making a comeback. Concern for hygiene and plummeting oil prices have come together in a perfect storm, with a massive surge in production of PPE, water bottles, take-away food containers, pre-packaged produce, and home deliveries wrapped in single-use plastic bags; which will have long term environmental impacts.

However, the plastics recycling sector has taken a severe hit. With the price of virgin plastics plummeting due to low oil prices, recyclers are currently unable to compete; jeopardising the economic viability of plastics recyclers. In addition, industries have been faced with direct disruption by Covid-19 -- recyclers are seeing lower order volumes as many of their customers are also operating at a reduced capacity -- creating redundancies from reduced demand and lower revenues. This has added severe pressure to an already highly price sensitive and competitive sector.

This project seeks to address these challenges for recyclers, enabling them to recover from the effects of the Covid pandemic, developing a new AI machine learning tool that will increase their productivity and profitability and consequently support the UK plastics recycling sector in '\_building back better\_'.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NDG ARTIFICIAL INTELLIGENCE LIMITED	Development of a prototype of an on-premise routing engine utilising an AI-based solution to improve the route planning process to enhance carer utilisation by more than 10%	£95,692	£95,692

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 carer industry has limited availability of carers due to high turnaround and a significant amount of unfilled vacancies. Further, a significant amount of money and time is lost due to inefficient route plans between home care visits. This means that each carer sees a sub-optimal number of patients per day. The COVID-19 pandemic has exacerbated these issues due to reduced revenues and carer availability. NDG, founded by Nigel Gittins and Dr Rodrigo Pinheiro, aims to provide an innovative and affordable AI-technology that can be implemented in the home care sector to improve carer utilisation and prevent unnecessary expenses.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Sano Genetics Limited	Long Covid Patient-Centric Virtual Biobank	£83,871	£83,871

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 inability to predict personalised disease progression (i.e. why do some people suffer more severely than others or respond differently to treatments) drastically reduces our ability to treat complex disease. Personalised medicine requires multiple sources of data on an individual level (including genetics, medical history, and other testing) and the ability to track changes in this data over time and in response to treatments.

While there are many research studies including hospitalised COVID-19 patients, there is a gap in the current research. People who have COVID-19 related symptoms for longer than 3 weeks, may have not been hospitalised and may not have a positive covid test, are not being studied. Furthermore, this group does not have a clear healthcare pathway to engage with due to the lack of understanding of their illness.

Widespread social distancing has made data collection for precision medicine research substantially more challenging, as patients are unable to safely visit research sites.

Sano has developed a platform for at-home precision medicine research, including at-home sample collection and a software platform for longitudinal data collection. We have validated the platform in disease areas such as Multiple Sclerosis, and are now using it to build a collaboration to study Long Covid patients.

We are seeking funding to collect samples and DNA test more Long Covid sufferers to better understand COVID1-9 infection, and the role that genetics plays in severity.

The Sano Genetics platform will enable researchers in drug discovery, vaccine development, and biomarker development to quickly quickly map, stratify and draw conclusions from big data sets collected via at-home genetic testing, self-reported longitudinal data, and links to existing medical records.

Beyond research into COVID-19, this funding will additionally accelerate platform development to enable fully remote research and trial participation in other complex diseases where at-home precision medicine research is urgently needed.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PLYTIME LTD	PLYTIME Learning Online MVP	£99,994	£99,994

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

PLYTIME Learning is a full-service tutoring marketplace designed to help 1-to-1 tutors, parents and students from all backgrounds, to be their best

PLYTIME Learning aims to deliver the most effective tutoring solution at the lowest possible cost - our mission is to reduce the cost of private 1-to-1 tutoring to as close to zero as possible

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Sustenance Partners LLP	Sustenance Food Hub Platform	£71,786	£71,786

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 COVID-19 crisis laid bare the vulnerabilities of the corporate food system, supermarket supply chains buckled while small-scale producers stretched already scarce resources even further in the face of soaring demand. Calls for practical support to improve logistics, maximise shared assets and mobilise key stakeholders are growing against the backdrop of a massive economic recession.

Combining deep experience in relevant sectors of the food, social enterprise and finance spaces, at Sustenance we recognise that local food is so much more than a commodity - it's a relationship. Sustenance's proposal is designed to take the important work of platforms such as Open Food Network a stage further: with a business model as a design, delivery, service and support partner for local food networks, we will become participants in networks in a variety of contexts, positioned in the important place between solution-led and platform-led innovations.

The R&D proposed in this bid will focus on the well-established Food Plymouth network and its potential market, surveying stakeholders, co-creating and trialling model options and supporting tools for local food webs in and around the city, able to be offered out and adapted in other locations in future.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INGENION MEDICAL LIMITED	Development project to achieve CE marking on Ingenion's flagship innovative catheter product, which uses a magnetic valve that enables a patient to easily use the same catheter for up to 28 days	£99,474	£99,474

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 a need for a longer-use, safer catheter for the millions of patients suffering from bladder control challenges across the world. Living with a catheter is unpleasant, often embarrassing and is associated with a number of complications, the most severe of which is the risk of Catheter-associated urinary tract infections (CAUTI). CAUTIs are the most common form of hospital-acquired infection with 75% of UTIs associated with catheter treatment. (US CDC website re CAUTIs, last updated Oct 2015) CAUTIs account for 13% of the combined mortality for all hospital-acquired infections and contributes to antibiotic resistance (Becker's Hospital Review, May 2015).

Ingenion specialises in innovative medical device development and is led by Edward Cappabianca, Zia Mursaleen and Alistair Taylor. The Company has developed a solution to address the limitations of existing catheters responsible for these shortcomings -- a catheter with a magnetic valve which can be used safely for up to 28 days. Ingenion is seeking funding to CE mark its innovation in order to attract further investment and sell the product to the medical market and ultimately make patients' lives easier, safer and more dignified. This project has a projected year-five post-project revenue of £24M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
NQMCARE LTD	NQM Dynamic Resilient Resourcing	£99,425	£99,425

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Dynamic Resilient Resourcing (DRR) is a set of advanced tools that enable health and care providers to effectively plan, share and collaborate regarding health care resources and acute and chronic patient demand.

As the recent experience tackling the fallout from COVID-19 has shown, effective planning is critical to minimise health and economic interruption. From a health and care system perspective, this means understanding the local capacity and resilience of resources that are available to tackle the problem, identifying where pressure on resources will occur, and being able to respond quickly and intelligently to changes in capacity and demand.

The work builds on award winning solutions NQMCare has already delivered in the health and social care analytics and planning area. We have already undertaken some ground breaking work with GP practices to enable them to understand patient demand and staff skills and match them earlier in the patient treatment process. DRR provides major innovation in its integrated and dynamic approach to tackling fast moving scenarios like Covid.

Traditionally health and social care providers work with resource silos. Staff are considered to be trained to very specific disciplines, with fixed work flows and limited points of access for service users. On top of this, providers of primary and secondary healthcare and those of social and community care have limited ability to share resources, or even information about their resources. DRR challenges this model by providing tools to enable intelligent transparency, sharing, and allocation of resources.

DRR is a dynamic resource model that is integrated across health and care systems. It consists of a number of integrated modules:

- \* Population model: a fine grained demographic population model for the UK
- \* Demand model: a flexible demand model that anticipates fine grained resource demand for skilled personnel over time
- \* Resource model: with feeds from primary, secondary, social and community care
- \* Skills model: detailed model that identifies which skilled personnel can handle which care demands
- \* Real time capacity model: using appointment data to provide up to the minute information on fluctuations in demand and
- \* Scenario modelling: an ability to simulate different scenarios over the underlying model

The model will focus initially on human resource (skilled personnel) but could be adapted to other fixed resources (vehicles, equipment, property) later.

We envision a system that can provide data backed recommendations and tools to:

- \* Strategically manage the workforce and training for resilience and to meet future demand
- \* Tactically triage and direct incoming demand to the most appropriate workforce across primacy/secondary/social and community
- \* Manage resources to optimise cost efficiency
- \* Enable providers to share resources
- \* Understand the margin of error and risks entailed
- \* Respond to real time demand fluctuations with optimised use of existing resources

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

NQMCare is a new company focusing on health and social care analytics. We have early products in the market to manage domicillary social care, with local authorities (Southampton, Portsmouth, Oxfordshire, Sunderland and Torfaen). We have support from a local GP practice and Southampton CCG and believe the DRR will increase resources available to tackle Covid-19\.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
HUNDO LTD	An innovative first-to-market gamified recruitment platform for under 25s, aiming to remove hiring bias and to decrease youth unemployment, while generating a year-5 post-project revenue over £5M.	£96,176	£96,176

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Esther O'Callaghan OBE and Piers Collins, Hundo is a UK-based SME that intends to provide a solution to high youth unemployment, which has been further worsened by COVID-19. Offering backgrounds in youth employment programmes and recruitment, the founders of this project intend to create a fully immersive hiring platform using AI and AR/VR technology to give young job-seekers better access to career opportunities. In addition to addressing youth unemployment, this innovation should further address the wider unemployment challenges posed by COVID-19, and generate a year-5 post-project revenue of over £5M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
C-CAPTURE LIMITED	Development of low-cost, compact and effective CCGT carbon capture technology to enhance a sustainable post COVID-19 economic recovery	£99,420	£99,420

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 support the development of C-Capture Ltd's world-leading carbon dioxide capture process, through development of an innovative absorber system optimised for natural gas power plants, offering improved capture rates at a lower cost with a smaller footprint than existing systems

C-Capture designs world-leading chemical processes for the capture of carbon dioxide. C-Capture has patented a unique, solvent-based technology which offers a safe, low-cost way to remove carbon dioxide from emissions using a post-combustion capture approach. Our technology uses 40% less energy than current commercially available technologies, and our unique solvent, developed in the UK, is non-toxic and could be manufactured from biological sources.

A climate-focused post-COVID-19 recovery package is needed to form a green resilient recovery; it is essential this includes funding for carbon capture and storage projects. The International Energy Agency, the Committee on Climate Change, and the Intergovernmental Panel on Climate Change all agree that CCS is vital to achieve net zero carbon emissions. Funding for projects which help bring costs of carbon capture technologies down help the UK and the world achieve this goal.

This project would see C-Capture work on a novel absorber philosophy, which would help optimise the performance of the technology for certain application areas, in particular those with low concentrations of CO<sub>2</sub> such as those found in the flue gas from a combined cycle gas turbine (CCGT) plant, the most common way of converting natural gas into electricity. CCGTs involved in power generation are currently responsible for 12% of the UK's CO<sub>2</sub> emissions and are likely to be an important component of the energy system for many decades.

It is vital we optimise carbon capture technologies in line with industry-specific requirements, in order for the barriers to large scale deployment to be overcome. Flue gases from CCGT plants have a relatively small concentration of CO<sub>2</sub>, typically 3.5%. These low concentrations of CO<sub>2</sub> present a technical challenge due to the large volumes of gas which need to be processed; the traditional solution would be to increase the size of the absorber column which considerably increases capital costs. The cross-flow absorber we propose developing will offer improved absorption rates at a lower cost with a smaller footprint. The benefits to potential customers are improved performance with decreased costs and smaller space requirements.

C-Capture have identified several customer sites in the UK who would be interested in piloting the technology once demonstrated under this project. By working closely with customers and understanding the challenges they face in accessing decarbonisation technologies, C-Capture is ensuring its technology is developed in line with customer requirements and the barriers to deployment are reduced. As the world recognises the importance of building back better after COVID-19, we must all work together in the fight against climate change. Optimisation of C-Capture's innovative technology is necessary to build long term resilience for a sustainable power and industrial sector.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ARBOR STEEL LTD	Development of a Remote Identity Verification and Authentication Method Based on Ultra-Secure Facial Biometrics	£98,979	£98,979

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Project description - provided by applicants

Arbor is an SME specialising in cyber-fintech. The co-founders (Ed Goodchild, Chris Noon, Vamshi Lingampally and Gary Stevens), a team experienced in wealth management and tech entrepreneurship, are seeking to address the challenge of online client verification and authentication using facial biometrics. The Arbor solution provides multi-factor authentication for businesses that could save customers £34,000 per year. Should Arbor be successful they could generate a year-five post-project revenue of £6.49M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KP TECHNOLOGY LTD.	Ultrafast Kelvin Probe (UKP)	£107,231	£99,725

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 ultrafast Kelvin Probe (uKP) system will allow for the study of photoinduced dynamical processes in atoms, molecules, nanostructures, and solids. The capability to combine very high time resolution, down to the nanosecond regime, with broad spectral coverage will be unique in the market. The ultrafast Kelvin Probe will combine high temporal and spectral resolution and provide time-dependent structural information on photochemical processes. This information will be instrumental in the design of future photovoltaic and light-emitting devices. This project builds on promising proof-of-principle trials, we aim to produce an operational nanosecond system with well-characterized results on exciting new materials.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MYWAGE LTD	Development of a sustainable, first-of-class automated net pay engine with low set-up costs to reduce high payroll administration costs to enable businesses to pay workers more frequently than through traditional weekly/monthly payrolls	£99,534	£99,534

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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\*\***

Founded by Orsela Cani and Intars Olbiks, Mywage Ltd (Mywage) is a rapidly growing UK-based SME working to solve a globally unmet need to reduce high payroll administration costs, improve workers' financial standing and boost tax revenue. COVID-19 has increased the urgency for payroll reform, with companies using in-house desktop solutions finding they cannot run their payroll systems remotely. Mywage's USP is to provide a best-in-class, automated net pay engine at a fraction of the setup costs required by its competitors.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Note: These proposals have succeeded in the assessment stage 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 experimental optimiser for supermarket home deliveries to improve efficiency and sustainability in response to the substantial growth in demand as a result of COVID-19	£104,897	£99,652

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

Current supermarket home delivery mechanisms typically offer users an inflexible set of slots (usually 2 hours for food) which fail to make maximum use of the customer's actual time at home and rule out delivery times for customers for whom the rigid slot boundaries do not align with out-of-home activities.

The project will deliver an integrated slot booking and routing solution for Attended Home Delivery that will allow end-users to specify arbitrary delivery availability rather than rigid 1, 2 or 4 hour time slots. In doing so it will enable route planning to take advantage of the wider time windows available for delivery to home workers, the retired and others who are able to receive deliveries across more than the standard time slot.

Wider time windows translate to more efficient route plans, saving fuel, driver's hours, CO2 emissions and traffic congestion.

The efficiency savings could be used to benefit customers through lower delivery charges particularly rewarding those who can provide the widest availability.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
99POINT9 HYGIENE LIMITED	A First-to-market Intelligent Surface Disinfectant Device, Reducing Contamination Rate While Restoring Consumer Confidence	£91,329	£91,329

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Eric Wilkinson, Richard Grogan and Simon Sassoon, 99point9 is a UK-based SME that intends to take advantage of the increased awareness of public hygiene standards due to the current pandemic concerns. Offering backgrounds in entrepreneurship, management and venture capitalism, the founders of this project intend to generate a unique set of automatic disinfectant devices that can allow businesses to adhere to high standards of hygiene. In addition to supporting public health, this innovation should further address the environmental challenges posed by the use of paper towels and wipes, and generate a year-5 post project revenue of £74M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOURAIID LIMITED	A unique solution to digitise charitable collection and increase online spending and the day-to-day efficiency of charities	£96,414	£96,414

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\*\***

Victoria Thompson, Bill Ashlock, Jannah Patchay and Humaira Ali co-founded the rapidly growing UK-based SME known as FourAid. A friend to the FinTech industry and charitable organisations alike, FourAid seeks to empower charities through innovation solutions. COVID-19 has not only caused great alarm in public health, it has also devastated the for-benefit sector. Charities are now facing a myriad of barriers in the transition to digital donation collection and distribution: high fees, high risks and high incompatibility with current options. As such, FourAid proposes to create an e-money wallet and platform tailored to meet the needs of the for-benefit sector. By leveraging blockchain technology and offering opportunities for gift aid and AI technology, FourAid's unique solution will disrupt the market and serve the charities and NGOs that serve 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 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EXYO DESIGN LTD	Development of a sensorised standing and balance rehabilitation aid (SBA), with facilitated remote supervision and gamified therapy, which can assist and motivate elderly patients to perform fall-prevention exercises remotely and safely to prevent falls.	£80,839	£80,839

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Andrew Morgan, Christopher Hughes and Jonathan Charlesworth, eXyo Design Ltd is a UK-based SME that intends to address the serious issue of falls in the over-65 population, which currently costs the NHS over £2.3B each year. The founders and core team aim to address this issue through the development of a sensorised remote clinical monitoring tool that will use a combined support approach to facilitate engagement, exercise and fall prevention. As COVID-19 has resulted in the over-65s being isolated from their support networks, this tool will be crucial to both users and the NHS. Based on this much-needed development, eXyo proposes a year-5 post-project revenue of £7.2M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	Project Narnia — Total control speed-breeding environments for seed development and R&D	£99,729	£99,729

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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're facing unprecedented threats to food production systems due to the impact of climate change, COVID-19, economic crisis, Brexit and a rapidly growing global population. We build cutting-edge technology that enables the growth of local produce year-round, using fully-controlled indoor vertical farming systems. Our mission is to respond to this urgent call by driving technological innovations that'll enable us to meet our crop requirements over the next century, without harming the planet.

We're acutely aware of the value of our work in responding to societal inequality. In particular, food supply, cost and quality disruptions disproportionately affect the less well-off in society, as demonstrated during the COVID-19 pandemic when food banks struggled to meet the nutritional needs of users in the UK. We aim to push the boundaries of what is possible within TCEA and build more sustainable local food production systems that will serve their communities effectively.

The UK is now presented with a unique opportunity to lead in the development of technologies that will transform and modernise agriculture across the world as all nations seek to secure domestic food production.

Totally Controlled Environment Agriculture (TCEA), or Vertical Farming (VF) as it is commonly known, is still relatively new but will form a significant part of the global modernisation of agriculture for increased local food security and sustainability. It's currently expensive to purchase TCEA systems both for growers and for researchers. This project seeks to de-risk and reduce barriers to entry for growers and researchers by producing a wardrobe-sized fully controllable TCEA system to enable users to test and understand the viability of different crops within VF systems.

Following successful trials germinating blueberries in our full-scale vertical farm, we are seeking to enable growers to use VF systems for more than lettuce and microgreens. This project aims to give growers and researchers the tools and opportunity to test different crops at different stages of growth within a TCEA system without the need to set up a full-scale vertical farm. We believe that this innovation will provide users with the opportunity to deliver proof of concept and then scale up once the evidence clearly demonstrates that VF can have a positive impact on yield, sustainability, and resource efficiency.

The system will be:

- \* Fully controllable from the heating, ventilation, and lighting to precise nutrient dosing;
- \* Be fully enclosed and contaminant-free;
- \* "Plug & use" with limited plumbing and electrical work needed;
- \* Adaptable so it can be built with different hydroponic systems depending on user requirements.

The UK TCEA market remains nascent and innovations continue to happen at hurtling speed. However, without conclusive evidence and real-world testing, we cannot accelerate the industry at the speed required to ensure the UK is a world-leader. Full-scale vertical farms in shipping containers remain outside a viable price point for most growers and researchers. This project is designed to remove that barrier to entry to create opportunities to explore the full potential of TCEA systems for a broad range of crops.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
LEVEL FINANCIAL TECHNOLOGY LIMITED	Level Fintech: Building back Better Financial Wellbeing for UK workers via payroll linked savings and bespoke budgeting	£99,780	£99,780

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

\_Over 20 million of us can't manage our money. 11.5 million have less than £100 in savings, and nearly nine million of us are in serious debt\_'.

This was the assessment of the Money and Pensions Service (MaPS) on the UK's Financial Wellbeing prior to Covid-19\). The pandemic has served to amplify these societal issues given the increase in unemployment/furloughed workers.

Moreover, Covid-19 presents a significant budgeting challenge as the country tries to get back to work. Workers may come off furlough, payment holidays end and workers incur all the associated costs of being back in the workplace (travel costs etc.) will be re-incurred.

Our project (Level) will create an innovative financial wellbeing platform for employers to help their staff deal with these issues. This will be done via payroll-linked savings product enhanced by Open Banking powered behavioural 'nudges'.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SOLECCO SOLAR LTD	Solar Roof Tiles Made From Recycled Plastic	£99,972	£99,972

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

Decarbonising buildings and transitioning to decentralised clean energy supply, recovering and recycling plastic waste, and improving the desirability of rooftop solar, are all essential in achieving our critical Climate Change targets, reducing our environmental impact and keeping Global Warming below 1.5°C.

Existing approaches have many deficiencies and limitations that prevent them from delivering the optimum solution. So, we created one that does.

Concrete, glass and aluminium are three of the most environmentally harmful materials in existence, with high carbon footprints, greenhouse gas emissions, energy intensity and fossil fuel requirements. They are also the very materials used to make conventional roof tiles and solar panels.

Solar panels also have limited generation capacity, can increase the embodied carbon of the building, and compromise its visual appeal.

Replacing these harmful materials and maximising clean energy production at point of use are key to tackling the socioeconomic and environmental impact buildings and energy supply currently have on the planet.

We've created something unique, the Solecco Solar Roof. A blend of our zero-glass Solar Tiles and matching Mariana Tiles (which take their name from the Mariana Trench. At seven miles beneath the surface it's the deepest known point of the world's oceans. Alarmingly, this is also where deposits of plastic waste have recently been discovered). All made using plastic removed from the waste stream that would otherwise pollute the land, air and oceans.

It looks like a traditional roof, but it's so much more than that. It's much more than an aesthetic solar roof product. We're completely changing what's possible.

Our new Solar Roof maximises on-site clean energy production, transforms the operating and embodied carbon footprints of new and existing buildings, and removes the aesthetic subjectivity and compromise of panels.

What can a Solecco Solar Roof do for an average sized home? /

- \* Generate over 100% more clean energy per roof than solar panels.
- \* Reduce the annual operating carbon footprint by over 80%, saving over 2.4 tonnes of CO<sub>2</sub>e per year, and enabling the property to be net energy positive.
- \* Immediately reduce the embodied carbon footprint of the roof by over 85%, eliminating over 10.5 tonnes of CO<sub>2</sub>e per house.
- \* This reduces the embodied carbon footprint of traditional homes by over 20%. If built using modern methods of construction, the carbon savings created are greater still. Over 25% for light-gauge steel, and over 35% for timber frame builds.
- \* Replace over 3 tonnes of concrete, glass and aluminium with over half a tonne of recycled plastic, reducing the roof weight by over 70%.
- \* Cut the energy intensity footprint of each home by over 22 megawatts.
- \* Save over 8 tonnes of embodied fossil fuel use per house.

Positioned to be price comparable and affordable, with an average 3-5% uplift in total build cost easily offset by the increase in the home's value. When

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factored into a standard mortgage, adding £20/month creates energy savings of £70/month. So, for under £5 a week the household feels the benefits of our Solar Roof, and so does the planet.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>  
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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	TRUSS: Titanium Reinforced Ultra Strong Structures	£60,741	£60,741

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

The public concern for the environment has increased steadily over recent years and has become a major concern to governments world-wide. The UK has recognised the need to act on greenhouse gas emissions for many years through international treaties as well as national programmes and legislation. COVID-19 has not diminished the desire for a greener and cleaner future, with increased desire to ensure that the investment in recovery from the COVID-19 pandemic should wherever possible focus on cleaner technologies for the future and especially technology where the UK can compete globally or take a world leading position.

Civil aircraft are already being developed to be cleaner and lower emissions through lighter aircraft, more efficient gas turbines, better flight rules and improved aerodynamics. However there is a limit to the efficiency improvements that can be achieved with the conventional tube and wing aircraft design. Therefore engineers are looking at blended wing aircraft which are more aerodynamic and therefore efficient. Blended wing aircraft will require new designs and structures as the tubular fuselage is structurally very efficient.

The most efficient blended wing structures rely on a truss structure made up interconnecting thin tubes with a light weight materials as skin. These tubular structures need to be very mass efficient, easily assembled to make very large structures and capable of long service life as inspection, repair and replacements will be very challenging once the aircraft is in service.

Conventional metals are still relatively heavy compared to light carbon-fibre composites (CFRP), however this can be expensive to produce and can present challenges when joining in large structures due to the need for adhesively bonded joints and open-assembly curing. The nodes need to be metallic with sufficient interface area for load transfer between CFRP struts. These can offer relatively poor compression strength versus tensile, leading to bulkier struts or truss designs to minimise compression loading.

TISICS has developed an innovative solution for very light space system needs. Ceramic fibre reinforced aluminium or titanium exceed the tensile and compression strength and stiffness of aerospace metals and the compression strength of CFRP. When combined with integral diffusion bonded joint nodes, the struts provide greater mass efficiency than CFRP. The integral metal nodes can be welded to adjacent struts to enable large wing and fuselage structures in an aircraft assembly environment through robotic welding.

This provides a high integrity, long service life, low mass, truss structure solution for future blended wing aircraft. The UK is the only commercial producer of this technology in Europe.

This project will develop methods to build multi-strut cells and to join struts into larger structures. Demonstrating this will enable faster integration into blended-wing development projects.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IHG PHARMACO LIMITED	Developing mouthswab patient friendly testing combined with determining African/Asian incidence of a biomarker to reduce risks of adverse birth outcomes using a novel pharmacogenomic test	£100,000	£100,000

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

COVID19 has required face to face contact with patients to be as limited as possible thus making obtaining clinical trial samples very difficult.

The project comprises using mouthswabs to gain access to patients DNA to genotype for the incidence of a biomarker associated with adverse birth outcomes and include the results in a large clinical study. These patients account for a high proportion of deliveries in large city hospitals and have a higher risk of adverse birth outcomes for reasons as yet unknown. Mouthswabs will allow patients to be tested without need of visiting clinics to provide a blood sample.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BEEZER (PWA) LTD	Development of the Appzer platform that lets businesses easily and affordably convert websites into progressive web applications (PWAs) that can deliver a more mobile friendly app-like experience to users	£97,362	£97,362

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Project description - provided by applicants

Founded by Brian Smillie (Entrepreneur, CEO), and with Grant Findlay (Software Engineer, CFO) as an early formative team member, Beezer (PWA) Ltd (Beezer) is a rapidly growing UK SME that aims to develop a new platform that will let businesses easily and affordably convert websites into progressive web applications (PWAs). While businesses are forced to move online in an increasingly mobile-first world, current solutions do not provide automation for the transition. To fix this, Beezer aims to use its Appzer platform to provide a quick, non-technical interface for the conversion. Beezer proposes a year-5 post-project revenue of £7M+.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
S-CUBE TECHNOLOGIES LTD	SmartEye Is A One-Stop Regulatory Solution That Will Help Life-Saving Medical Devices Get To Market Faster	£99,956	£99,956

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

Anindya Mookerjea, Smitha Prabhu, Geof Wolfenden and Bulla Singh founded the rapidly growing SME known as S-Cube. This UK-based start-up company recognises the current unparalleled demands on medical device manufacturers. As circumstances associated with COVID-19 hinder life-saving medical device development, S-Cube seeks to create and confer novel solutions. SmartEye, a one-stop platform, will streamline the regulatory process for manufacturers to increase efficiency and overcome current obstacles. Additionally, by providing tools to conduct remote audits and anticipate patient needs, SmartEye will enable manufacturers to move forward with confidence in any circumstances.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AQUAFFIRM LIMITED	Development of new web-based scenario analysis tool to help international trading businesses plan through the COVID pandemic	£99,778	£99,778

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 impacted millions of people in almost every corner of the globe.

Together with its impact on public health, the COVID pandemic has detrimentally affected businesses around the UK and indeed around the world. Lockdowns and social-distancing measures resulted in large hits to the British economy.

Companies around the UK and Europe (and, indeed, around the world) desperately require new tools to help predict and plan in a new and uncertain post-COVID world -- indeed, what is needed is an interactive online planning tool which brings together sophisticated epidemic modelling with industry-specific financial and operational parameters to enable simulations of things such as likely global supply-chain disruptions, COVID impacts on markets in different countries around the world, or impending human resource-related issues.

AquAffirm intends to develop just such an online tool in this project, drawing upon its recent collaboration with one of the world's leading academic epidemiology groups (MRC GIDA at Imperial College), a collaboration which recently produced the world's leading COVID-19 scenario analysis tool (\*\*covidsim.org\*\*). Uniquely calibrated on a daily basis for 135 low- and middle-income countries (LMICs) around the world, covidsim provides decision support associated with key aspects of the epidemic to healthcare ministries globally. The global reach of covidsim and its specific targeting of LMICs ensures equality and inclusion; we intend the new web portal (tentatively titled COVID-LIVE and its subscription only sister, COVID-LIVE-PRO) to do the same, with its free-to-access part enabling global scenario planning and its subscription-only part providing advanced business intelligence features.

We will also reduce UK carbon footprint by helping to make businesses more efficient.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
IT'S ALL ABOUT THE CUSTOMER LTD	AI-backed app utilising a traffic light system for Covid safety of retail and brand stores based on input by retailers and consumers to encourage the return of shoppers into stores.	£98,452	£98,452

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Project description - provided by applicants

**\*\*Public Description\*\***

IAATC was founded by Martin Newman to help consumers get back their confidence in shopping on the high street and to support businesses at risk of closing following the COVID-19 pandemic. The founder proposes building an AI-backed application that will create a traffic light system based on input by retailers and consumers about the safety measures and services offered by brands. Should this project be successful IAATC will generate a £5.5M year-five post-project revenue.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SOLOMON & WU LTD	100% Waste Stream Panel Project	£98,214	£98,214

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

Our aim is to produce panels made from 100% waste stream materials that exemplify principles of circularity, low carbon manufacturing, and sustainability. These will be market leading for design led interior panels and be able to significantly contribute to LEED and BREEAM schemes.

With only 50% of the world's building stock required by 2050 already built it is imperative that architectural projects, both new build and refit, find ways to store carbon and be carbon neutral or carbon negative. This has to be driven by material choices to offset the emissions of construction work.

We are a design led company producing aesthetic panels for interior use from our factory in Birmingham, this project will allow us to adapt to the world post-covid and ensure we can return to growth.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Radical Fibres Ltd	Eco-friendly viral-filtering for facemasks	£83,100	£83,100

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 pollution was already one of the greatest threats to our planet before the coronavirus outbreak. The huge increase in the daily use of plastic disposable facemasks, along with other forms of PPE to keep people safe and stop the spread of disease, is not sustainable. Numerous reports are emerging everyday imaging and documenting the huge increase in PPE found on river banks and beaches. It is currently impossible to go for a walk from your home without seeing some form of discarded plastic PPE waste polluting the environment. We intend to change this by developing a sustainable filter material that is effective at stopping very small particles, smaller than the COV19 virus (60nm) and thus effectively stop virus transmission as well as eliminate the damage the current masks are doing to the environment. This filter material will be integrated into masks for the general public.

The UK economy is forecast to shrink 35%, with 2 million jobs lost. Until immunisation becomes available nation-wide (and worldwide), there is a significant risk of major disruption and the UK cannot afford a return to lockdown. Face masks are the new norm, but, apart from the high-end medical N95 respirators, no other filters are rated to stop viruses effectively. The supply of high-end respirators must be prioritised for frontline medical staff.

Our solution is to manufacture filters using eco-friendly nanofibres made from biodegradable polymers such as cellulose. These filters which are highly-breathable, flexible and can be used as inserts into natural textile, simple face masks. This will increase the protection of cloth masks (even home-made ones) significantly, with the efficiency then being ruled by the tightness of the fit around the filter/face. The nanofibres will also harness static electricity through engineered scientific design to trap and hold even the smallest of nanoparticles, and may be of further use in areas of high pollution or for people with chronic respiratory problems.

Nanofibres are produced using a high electric field to pull a fibre out of a droplet of solution on the end of a needle (a process called electrospinning), a very slow process that would make filters for ~3 masks/day. Due to electrostatic shielding, bringing more needles to bear is not a linear process, requiring higher and more unsafe voltages, and limiting the choice of materials that can be used. Our innovation is a modular solution that increases deposition rates by 1000 - 10000 times per module.

In this project, we will develop the prototype eco-friendly filter material, validate it independently for viral filtration and move to pilot production of a consumer and a medical filter.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CELL LANE LIMITED	Development of a novel, cost-effective, platform-based cell-sorting solution superior to current best-in-class	£98,406	£98,406

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Dr Chris Wood (Associate Professor of High-Frequency and Mesoscopic Electronics), Christoph Wälti (Professor of Bionanotechnology) and Jennifer Kirkham (Professor of Oral Biology), Cell Lane (CL) is a growing UK-based SME specialising in cell-separation technologies to support next generation, regenerative cell therapies. Current cell-separation technologies are either inefficient, costly or introduce impurities, thereby slowing the advancement of cell therapies to treat a range of injuries and disease including cancer, Parkinson's disease, diabetes and stroke. CL aims to provide a novel, cost-effective, platform-based, cell-sorting solution superior to current best-in-class technologies. CL proposes a year-5 post-project revenue of £4.6M--6.2M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
BLACKDICE CYBER LIMITED	Development of an Intelligent cyber defence software for Home and SME Use that Predicts Cyber Attacks Before they Occur and Deals with them Accordingly	£97,549	£97,549

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 Paul Hague and Paul Jenkins, BlackDice is a UK-based SME that aims to address the issue created by the increased surface area for cyberattacks that is a result of the recent shift to remote/home working post-COVID-19. Making use of their extensive backgrounds in technology and business, the co-founders aim to address this issue through the development of an innovative AI technology that can provide enterprise-level security to small networks and home devices. This project will help to establish an improved cyber security market share for the UK, which is currently poor.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PHEW DESIGN LIMITED	Title: Development of an app that will provide information about patient condition and enhance the provision of healthcare and improve the discharge process in hospitals, thus freeing up beds quicker	£99,543	£99,543

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

### Project description - provided by applicants

Phew Design Limited was founded by Matthew Burgess and offers services to the healthcare sector. Currently, there is no streamlined process for monitoring the discharge of in-patients and notifying healthcare personnel about when they need to be discharged. Hospital overstay could result in relapses, deterioration of health, and various other health-related issues. Therefore, healthcare providers need a tracking system for monitoring admissions to the latest government standards using the Discharge to Access model. Phew's platform will provide speedy updates about patients' current conditions, which will enhance the discharge process in hospitals.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
PURPOSEFUL VENTURES LIMITED	An innovative integrated digital shareholder and corporate organisational solution to allow SMEs to engage with shareholders remotely and transparently	£98,597	£98,597

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

Project description - provided by applicants

Purposeful Ventures Limited is a rapidly growing UK SME specialising in Tech-for-Good. The company will develop an integrated digital shareholder and corporate organisational solution through a public DLT that will allow SMEs to manage and safely control investor ownership records as well as engage with the shareholders remotely and transparently, whilst directly reducing the amount of carbon released into Earth's atmosphere.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
EFFORTLESS DIGITAL LTD	FairTrader	£97,271	£97,271

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results



## Project description - provided by applicants

FairTrader has been the result of 4 years of research into and observation of craftsmen at work, experimentation with best practices and tools resulting in discovery of ways to address needs of users in the construction industry or the ones dealing with construction industry (for householders, builders and craftsmen) to introduce friction free service, smart contracts, automatic site surveys, accountability, new ways on interaction for digitally challenged users, timely communication and auditing of the work done.

This need is being heightened because of Covid-19 which has impacted the industry and has changed the way it works creating an opportunity to improve the way our users work and revolutionises the way construction industry (small builders, architects, householders and craftsmen) work. Combining both together delivers huge cost savings, increases user satisfaction and reduces build time.

Innovations in smart contracts, interaction methods, processes and service have been brought together to create a unique service designed from ground up for construction industry and craftsmen. Smart contracts (creation of contracts for piece of mind and accountability of both parties without need for a qualified legal individual), remote site evaluation and inspection (automatic drones and geo-tagging of site) for quoting without driving to site (improves builders' green credentials), timely communication to avoid no-shows and no access, surprise visits when unexpected and easy scheduling and notifications, easy access to site data even for individuals with physical constraints such as fat fingers are some of the benefits offered by FairTrader.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VM SYSTEMS LIMITED	Vertical Meadow Permanent Facade System	£95,413	£95,413

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 basis of the project is the development of an innovative new permanent "living wall" system for building facades. It is the development of an existing patented temporary living wall system that grows native wildflower meadows vertically into a permanent facade system. The living wall system has been designed to encourage biodiversity and increase greening within urban environments. It has also been designed to minimise maintenance requirements one of the key barriers to adoption currently.

The permanent version of the Vertical Meadow living wall system builds on the successful commercialisation of a temporary Vertical Meadow living wall system based on scaffolding sheeting for construction sites and other temporary sites. The permanent system, has been previously tested as single panels but owing to the upfront investment required to produce a demonstrator its development has been put on hold whilst the temporary version is developed. There is a patent granted on the permanent version for the principle in the UK and pending elsewhere.

The design principles of the permanent living wall system we are developing in this project is a rainscreen façade system that has been conceived to be a low cost system compared to the existing offerings. The principle USP of the Vertical Meadow technology is that it allows plants to grow from seed in situ dispensing with greenhouses and pre-growing of panels/plants as per 99% of existing vertical greening systems. It also requires low maintenance requiring one cut per year significantly reducing the operating expense compared to the existing systems. It has been designed in an identical way to existing metal rainscreen facades with the living aspects attached to the front of them making it construction friendly and therefore cheaper to install. It is a metal based system making it one of the only systems globally available that meets strict fire safety requirements. It can also be fully disassembled to meet circular economy principles.

The aim of the project is to utilise the existing intellectual property (IP) and develop new IP in the production of a demonstrator as a large-scale proof of concept. We are looking to produce an array of panels that interconnect of approximately 40m<sup>2</sup>. The benefit of a demonstrator this big will not only test how water flows between modules but also demonstrate the system to prospective clients. It will be used not only to prove the technical and environmental principles but also the cost and constructive principles in order that this can be delivered as a product following the end of the project. It will also be used as a sales vehicle for winning projects by inviting potential clients to view it.

The development of a demonstrator will allow for assessments of the biodiversity, circular economy and fire benefits as a way of providing a strong business case for the product beyond its economic savings.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
GLOBAL TELCO HOLDINGS LIMITED	A unique solution providing disabled users with a dynamic open banking platform automatically configured to their individual digital accessibility requirements	£98,699	£98,699

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

Disabilities come in numerous variations, generally categorised under sensory, physical or neurodiverse impairments. However, in relation to online experiences, particularly with online banking and financial services, many of these variations are not addressed in terms of accessibility. With COVID-19 driving online reliance on these services upwards, the need for access is greater than ever before. Global Telco Holdings Ltd (Axxess4Me), founded by David Agar and Penny Roberts, aims to achieve what has yet to be done: all-inclusive access, regardless of impairment.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AZURED (UK) LTD	Development of an Affordable and Flexible Solution for SMEs to Establish and Run a Highly Secure Remote-Working System, Resulting in Improved Efficiency	£99,859	£99,859

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

Founded by Martin Ferguson, Valerie Viaud, Andy Price and Neil Burman, Azured intends to address the considerable issue currently posed by the lack of secure and affordable remote-working solutions for SMEs. The issue has been amplified during the COVID-19 pandemic as businesses have had to change their working practices and more people are working from home. Azured is offering SMEs an affordable, managed, subscription-based multi-tenanted firewall that allows them to continue to successfully operate during COVID-19. Azured proposes to generate a year-5 post-project revenue of £6M+.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
CONNECTED2 LIMITED	A Digital Document Depository For The Logistics Industry, Reducing The need For Paper, Streamlining An Outdated System.	£99,461	£99,461

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 team at Connected2, a rapidly growing UK SME founded by Simon Crick and Jamie Baldwin, possesses a wide range of relevant, sector-specific, technical and general business skills, placing Connected2 at the forefront of logistics recruitment and training sector, with a digitised ecosystem ideally situated to the addition of its latest proposed innovation, designed to address a two-fold unmet need in the logistics sector: the access, completion and transfer of compliance, contractual obligations and health and safety compliance documentation by contract HGV drivers and transport operators under COVID-19 safe working conditions and the incentivisation of drivers to correctly complete the compliance documentation.

Connected2's solution is a new app, accessible on drivers' mobile devices, allowing the digitisation of compliance, contractual obligations and health and safety and other documents and their digital, remote completion. As this new product will link to Connected2's existing driver allocation, management and payroll system, the potential to incentivise adherence to COVID-19 safe document completion procedures will become achievable.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
VALID DATUM LIMITED	Application Title: Development of a working prototype of a tokenised data-security system that keeps tokenised data at rest secure when executing queries and searches to prevent fraud and give protection against cyber attacks	£99,569	£99,569

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

ValidDatum, an emerging leader in cybersecurity, was founded by Ms. Daryl Crockett and Ms. Chris Morecroft. ValidDatum is adapting to meet the unprecedented data management demands in the wake of COVID-19 through new technological solutions. Aiming to minimise data breaches, ValidDatum's Secure Search Black Box (SSBB) Solution overcomes the typical barriers associated with encryption security and tokenisation. This solution keeps data searchable, a key corporate advantage, without sacrificing the additional layer of security that tokenisation provides. As such, even in the unpredictable circumstances ahead, businesses can find solace in knowing their data will be secure no matter where their employees are operating from.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

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Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
MEDDICLE LTD	Integrated Remote Learning and Mental Health For Students	£81,500	£81,500

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

Meddicle are creating a remote learning platform that enables scaling of student wellness and support services through a conversational bot platform that intelligently identifies early signs of student mental illness and pushes support tools or connects students to appropriate services early.

Recently published studies have explored the impact of COVID-19 on student education and well-being (Cao et al., 2020). Approximately 25% of their sample reported experiencing anxiety symptoms, which were positively correlated with increased concerns about academic delays, economic effects of the pandemic, and impacts on daily life. Furthermore, among the many student surveys administered worldwide, one survey by YoungMinds reported that 83% of young respondents agreed that the pandemic worsened pre-existing mental health conditions, mainly due to school closures, loss of routine, and restricted social connections (YoungMinds, 2020).

With the recent push by the government to offer more funding and support to student mental health services we have a significant opportunity to enter the student wellness market and already have IOIs from universities and colleges throughout the UK.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPENCLEAN TECHNOLOGIES LIMITED	Redesign of Novel Hand Sanitising Door Handle Product for UK Market	£92,499	£92,499

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

OpenClean Technologies sells globally unique hand-sanitising door handles. We make award-winning, patented devices that turn the threat posed by door handles into an opportunity to sanitise hands. We want to address the needs of the UK and European markets for sanitising solutions that help make public buildings safe during and after the pandemic. Unfortunately, one of our two products -- TurnClean, requires substantial design and manufacturing changes to be used in the UK. The proposed project will address this problem.

Our project is important because the pandemic has challenged all businesses. All public buildings have now become a threat especially to those populations that are most vulnerable. It falls to every business owner to make their facilities safe. Unfortunately, offices, factories, schools, restaurants and hotels were not designed with infection control in mind. Importantly, they have lots of touch points where visitors and workers can deposit and pick up infections.

One such common touchpoint is the door handle. The WHO, PHE and the NHS have all warned about the dangers of picking up infections from door handles. Over time, there have been many attempts to design door handles that remain clean resulting in copper handles, silver ion handles, and even spray systems that spray sanitising fluid on the handle. Additionally, architects have tried to design them out of buildings entirely.

None of these solutions are sufficient. Door handles are and will remain extremely common in all buildings -- they can only ever be partially designed out. Further, door handles made of expensive materials and coatings have proven ineffective against the novel coronavirus with studies showing that the virus can remain on expensive antimicrobial copper for two hours.

Our products are different. Our aim is not to make the handle clean but rather to make hands clean. By combining a door handle with a hand sanitiser dispenser we make hand sanitisation easy and intuitive.

Our TurnClean product has been designed for American doors and American door handle fittings. TurnClean is not a door handle, but rather an aluminium, alcohol sanitiser dispenser that is designed integrate seamlessly with the handle. US door latches are most commonly designed around 3-inch hole whereas UK and European latches are very different. This means that we are unable to sell our turn clean product in the UK. However, principally the problem is the same we need a device which makes turning door handles safe.

We are applying for this grant because we would like to make a UK and European version of our TurnClean product. Though the potential market for our products is very large, our company is small. Our investors have provided sufficient funds for us to become established in the UK, but not enough to cover redesign and manufacture of the TurnClean product. If we are successful in this application we will convert our existing US-focused product for the UK market. We will use this fund to design, prototype and test this product.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ECOFYE LTD	This project will create a user-tested and fully functional automated sustainability solutions platform for SMEs, reducing emissions by 150,000 tCO2e annually.	£79,808	£79,808

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

Ecofye is a rapidly growing UK-based company, specialising in accelerating climate action and using autonomous technology to provide impactful sustainability solutions to SMEs. Founded by Daniela Arroyo-Olson, Daniel Keir and Tiago Fachada, their skills and experience have enabled them to design a business with far-reaching benefits for the environment and the UK economy, while creating job opportunities. The COVID-19 pandemic has had a direct and detrimental impact on companies globally. Sustainability has become an essential factor in the recovery from this pandemic. Ecofye will use the Emerald platform to perform automated qualitative and quantitative sustainability evaluations of a company's practices. It will also provide access to tailored solutions to improve companies' environmental and social impact. An integrated carbon footprint calculator and carbon offsetting services, and access to a community centred around circularity, provide companies with all the remaining resources they need to become sustainability leaders. In doing so, Ecofye proposes a year-5 post-project revenue of £9M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 LIGHTYEAR CORPORATION LTD	Enabling UK SME's to manage their supply chains in a remote world via Lightyear's cloud automation and collaboration platform	£95,385	£95,385

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

The procurement process for most larger SME businesses requires checks and balances to ensure Purchase Orders (POs) are approved and within budget, all of which is reliant upon collaboration and communication between internal approvers.

A PO is typically created on paper or on a digital system, and then approved either physically (with a stamp), or via telephone or email audit trail. The approval, exception handling and collaboration is handled outside of the software generating the PO. Once invoices are received, they need manually matched against the PO before being paid.

There are a number of challenges with this process, particularly with remote-working requirements during Covid.

The primary challenge is physical access to systems and documents. For SMEs that are using paper based POs, they can no longer share physical documents. For SMEs that are already using PO software (such as the market leader, Sage) these are typically old legacy solutions sitting on a desktop or office server. Most of the UK's existing PO systems are desktop/server-based that either require physical access to the desktop or to be within the SME's Protected Network (VPN) due to security requirements. These systems are therefore inaccessible from staff's remote homes.

Our project will build upon Lightyear's existing market leading Accounts Payable platform. Lightyear's award winning platform is already used by more than 3,000 businesses globally, and is saving them up to 80% of their costs (and time) by automating data-extraction and removing all traces of paper from the Accounts Payable process.

The project will research, design and build a cloud-accessible PO collaboration platform, accessible from any Browser or Mobile Device. The PO platform will include Lightyear's existing security framework built on the Amazon Web Services technology stack and will comply with ISO27001 security standards. This will allow us to scale the project to businesses of all sizes and meet any security concerns.

Lightyear's PO platform will enable SMEs and mid-tier businesses to create digital orders, and set up internal approval workflows which will seamlessly send POs to the relevant internal approvers, before sending the PO to the supplier. The supplier will then acknowledge receipt of the order via a hyperlink in the PO, and also allow the supplier to dynamically add notes/responses to the PO itself. The platform will allow total collaboration between all internal users and their suppliers, and provide a full digital audit history of the notes, interactions and approval milestones. Finally, lightyear will automatically match Invoices to Purchase Orders providing the full end to end procurement solution.

The technology will be available from anywhere, and enable businesses to enhance collaboration between their teams whilst working remotely or in the office.

The Global economy is facing unimaginable costs and challenges in their supply chain management. The Lightyear Purchase Order platform will be the global leader in accessible, affordable cloud based procurement software.

The technology platform will be designed and built in Lightyear's Belfast Headquarters and will be made available globally.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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	A revolutionary ground transport system to transport patients to and from hospitals, saving the NHS £2M a year	£99,993	£99,993

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 the team of Amer Hasan, Barnaby Hapgood and Nicholas Brown, minicabit brings expertise and understanding from the world of cab driving together with product and software development to create an innovative solution to the problem of transport to and from hospitals. This endeavour has experienced both setbacks and great opportunities as a result of the changes wrought by COVID-19, but the company expects its uniquely designed ride-finding algorithms and wide range of payment and vehicle options to develop into a post-project revenue of £15M.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage 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 ENERGY ROBOTICS LTD	Wind Turbine Blade Repair Technology	£86,717	£86,717

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

Our project aims to automate the repair of wind turbine blades that have been damaged by a phenomenon called leading edge erosion.

Leading edge erosion develops over time due to rain hitting the wind turbine blades as they rotate at very high speeds.

This issue is happening much faster than wind turbine manufacturers expected, with blades needing repairs every 3-7 years (depending on manufacturer, size and location).

This occurs onshore and offshore, and larger turbines with longer blades experience this erosion at a faster pace. It is estimated that the cost to offshore wind-power operators alone is €61 million due to direct repair costs and lost revenue.

Currently, blades in operation are repaired by removing them from the wind turbine or by a method known as rope access, in which technicians abseil down the wind turbines and fix the blades from ropes.

We are developing a tool named Blade RunnR which is designed around a proprietary coating which when applied correctly will protect the wind turbine blades for the remainder of its lifetime and cause no aerodynamic losses. However, the properties which make the coating perform so well also make it hard to apply correctly. The coating is a viscous resin that sets quickly, but must also be applied in a very specific cross-sectional profile. Applying the coating to the required specification by hand is all but impossible and very slow. Blade RunnR will take a new approach to applying this coating, guaranteeing conformity to specification and speeding up the application process significantly.

We aim to reach our ultimate goal of automated repairs through a two-phase implementation. In Phase 1 the tool will be deployed via rope access acting as a hand-tool for the technicians, and this is planned to be active in Q1 2021. For Phase 2, we will take the learnings from this, refine the design of the application system, and produce a robotic solution to deploy the coating. We are seeking to fund Phase 1 of this implementation strategy through this grant.

This will ultimately improve HSE of wind farm operations by removing the need for multiple repairs of the leading edge due to rain erosion, and create large savings for the wind power operations market in the UK and abroad, which will contribute to reducing the cost of renewable energy.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

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Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AIPATIENT LTD.	Intelligent Medical Case Storage and Analytics Platform for Healthcare Training	£85,092	£85,092

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/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 likely that most people will experience at least one diagnostic error in their lifetime, sometimes with devastating consequences" (Institute of Medicine, 2015), with UK-based studies indicate estimating that 1 in 10 patients admitted to hospital suffer harm (Vincent et al., 2001).

Unnecessary tests and treatments have been reported to cost the NHS £2.3 billion and directly linked to training, as the Academy of Medical Royal Colleges commented: "\_Deciding how and when to use these resources are clinical questions that can only be answered by those with sufficient training and experience"\_ (AoMRC, 2014). At the same time, in 2018/2019, the NHS paid a total of £2.4 billion in clinical negligence payments to cover patient damages and legal costs (NHS Resolution, 2019).

In the UK, there is an urgent need for medical training beyond the traditional "see one, do one, teach one" model (Rodriguez-Paz et al., 2009), while globally there is an increasing shortage of skilled healthcare workers, particularly in resource-poor settings (WHO, 2013).

Artificial intelligence (AI), defined as computer systems performing tasks without receiving instructions directly from humans, has the potential to revolutionise both healthcare and education (AoMRC, 2019). Similarly to the "virtual doctor" that provides users (patients) with remote diagnosis/advice, a virtual AI system that support users (students and practitioners) by providing feedback on their clinical patient interactions, for example communication, interpersonal, and diagnostic reasoning skills, could revolutionise training.

AiPatient is a Manchester-based start-up founded in 2018 by Scott Martin, a qualified doctor and entrepreneur, winner of AIMed Europe Dragon's Den 2018 and the Manchester Enterprise Centre Official's Venture Further Award. Our mission is to improve the quality, accessibility, and affordability of medical education worldwide. With funding, we will develop and test the feasibility of an Intelligent Medical Case Storage and Analytics Platform for Healthcare Training, enabling students to share and receive feedback remotely. Our aim is to improve communication skills and reduce misdiagnosis and other medical errors; thus, improving patient satisfaction, care, and reducing avoidable NHS costs.

With a team composed predominantly of University of Manchester graduates, AiPatient are building on University alumnus Alan Turing's legacy as the "Father of AI", ensuring the UK remains world leading in this field.

Note: you can see all Innovate UK-funded projects here: <https://www.gov.uk/government/publications/innovate-uk-funded-projects>

Use the Competition Code given above to search for this competition's results

## Results of Competition: The Sustainable Innovation Fund: Round 2 (De Minimis)

Competition Code: 2007\_COVID\_SIF\_DEMINIMIS\_R2

Total available funding is £38.6m

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
SIGNOL LIMITED	MOONA – Modelling Operational efficiency and Offsets for Net zero Aviation	£80,548	£80,548

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## Project description - provided by applicants

The COVID-19 pandemic has significantly affected the bottom line of the aviation sector, with IATA estimating that airlines will lose \$84.3 billion in revenue this year. As flight volumes are likely to be lower than expected into the near-term future, economies of scale within the industry are unlikely to return to their previous level. The way back to profitability for aviation is through improved operational efficiency.

We believe that this creates an opportunity for Signal to help shift the sector onto a lower carbon path. By taking advantage of a pressing need to find efficiencies in operation, we can ensure that these are delivered in a way which reduces emissions.

Signal is a software platform which monitors performance against individual targets, providing personalised and targeted feedback on fuel-use behaviours to nudge airline pilots into greater fuel efficiency, reducing operating costs and carbon emissions. This platform already has the ability to make donations on the behalf of pilots meeting their targets as a form of prosocial motivating tool. In this project, we would investigate the possibility of building an extension to the product allowing for the investment of saved fuel budgets (up to pre-defined limits) in accredited carbon-offsetting schemes as a form of incentive, allowing pilots to observe their performance not only reducing emissions directly, but potentially in creating zero net carbon flights.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DIGIWORKZ LIMITED	Digital Project Optimisation	£99,359	£99,359

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Project description - provided by applicants

Digiworkz was founded by Laurence Collins, Will Dignon and Harwinder Singh. Specialising in project management for digital projects, Digiworkz is proposing a disruptive technological solution for businesses increasingly requiring digital-led innovations. Project management technologies are largely focused on tasks, rather than pre-emptive risk management. Digiworkz proposed solution would use AI to integrate tasks, the skills required and programme data to create a smart vision of upcoming risks and how to solve these risks through skills matching saving businesses millions of pounds each year. Should Digiworkz be successful, Digiworkz could generate a year-five post-project revenue of £51M.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
APTAMIX LTD	SmartStand Is an Innovative Portable Workstation Solution Which Can Be Deployed Rapidly.	£99,646	£99,646

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### Project description - provided by applicants

Founded by Adam Rowles, Aptamix is a UK SME that intends to address the complexity and inconvenience faced by SMEs and their employees when setting up IT workstations. Making use of his background as an operations manager and IT software consultant, the founder aims to solve this problem through the development of a single product that encompasses everything a user needs for a complete IT desk setup. The developed module can be set up in under five minutes and will require only a single power socket. Based on the shift towards home working caused by COVID-19, this product will solve the growing need of individuals and SMEs to quickly adjust to new working conditions.

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