

Competition Code: 2005_CRD_CO_COVID19_R2

Total available funding is £40,000,000 rounds 1 and 2. £7,000,000 for this round

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CORIOLIS TECHNOLOGIES LIMITED	Open Trade Finance Platform for SMEs - Covid 19 and beyond	£48,125	£48,125

The Open Trade Finance Platform (OTFP) de-risks the provision of trade finance to SMEs first, by enabling low cost legal support and insurance against international invoices and contracts and second, by matching those exporting SMEs to trade finance providers. The SME trade finance gap is a particular problem in the Covid-19 environment because many exporting SMEs are falling outside core support measures such as CBILS that are available to other SME businesses, especially if they are in services or digital sectors.

The World Trade Organisation anticipates up to 32% collapse in world trade and there is emerging evidence that trade credit insurers are reducing their support to international trade in the current climate. SME exporters represent around 9% of the UK's business base and will suffer unduly from both these trends at the current time. However, the primary issue is that the risks associated with financing these businesses are high for finance providers because money is needed pre-delivery and the compliance costs are high. These are smaller and younger businesses, thus they have insufficient track-record to warrant this risk. The OTFP is a means tackling this challenge to ensure these companies survive and thrive beyond the crisis.

The OTFP is a web-based and mobile app that links SME export finance requirements to suitable providers of that finance, in banks or non-banks. It takes the financial and business development requirements of the SME and uses AI to match those requirements with the major providers of trade finance who already operate on blockchain or Platform as a Service (PaaS). This initiative is supported by major players in the trade finance sector.

The OTFP is a timely and innovative development that addresses the specific needs of a group of excluded small businesses. It will be delivered in complete compliance with government guidelines on social distancing and within the framework of the lockdown. Its immediate benefit to the UK could be as much as £30bn in SME export contribution to GDP at a time when global trade is threatened. Its lasting impact will be in quicker and cheaper SME access to trade finance and bank screening of SME clients.



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NOTO TECHNOLOGIES LIMITED	Hands free and fully PPE compatible communicator for clinicians in infection control settings	£49,986	£49,986

Mobilus (Trade name, the company name is Noto Technologies Ltd) is an innovative company that has developed a hand and ear free "intelligent walkie talkie" that is intended for use by staff in restrictive environments (construction & heavy industry setting). The vital innovation in this approach is to avoid the need to access the ear and mouth by using bone conduction technology to capture and record audio signals. In practice the Mobilus device is based on sensors that are in contact with the skull just behind the ear. The major benefit of this approach is that users can have a normal conversation, with a remote person, while wearing personal protective equipment such as ear defenders and face masks.

Mobilus has also developed novel software to support team communication, the Mobilus platform enables the teams to have a voice based "whatsapp" style feature. i.e. users can be included in pre configured "voice teams" such that a person's voice is broadcast to different teams to reflect working structure. E.g. Team A: immediate colleagues, Team B: crane operator etc...

Mobilus has been contacted by doctors that face significant communication challenges due to the Covid-19 pandemic. Strict infection control procedures (restricted room access, constant use of PPE) has a serious negative impact on team communication. They have asked Mobilus to develop a communications product for the clinic.

The current Mobilus product has been developed to clip onto industrial hard hats and industrial users. Mobilus is seeking to conduct an urgent programme of R&D (i.e. this project) to develop and new clinical PPE compatible communicator that is compatible with:

* Common clinically used visors, masks and respirators

* Clinical user needs, i.e. the software is suitable for use by doctors and has an interface and features that are suited to the hospital environment.



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OKULO LTD	Leveraging home-monitoring vision tech for urgent tele-ophthalmology appointments during COVID and beyond	£25,500	£25,500

Due to COVID-19, all routine face-to-face eye care appointments have been suspended (both in hospital ophthalmology and in community opticians). Since routine appointments comprise approximately 80% of all eye care appointments, and in 2019 eye units became the busiest hospital outpatient speciality, this is a major disruption for the NHS as a whole, and the 6 million patients in the UK who live with eye disease.

The eye chart is a fundamental aspect of assessing eye health, and, founded by eye specialists, OKKO are a certified software medical device company that creates technology to provide this on smartphones (using pictures, not letters, via a simple, accessible video game interface that has been co-developed by children as young as 3 years old and adults up to 85 years!). Our patent-pending and CE-marked technology to date has been concentrating on chronic disease in adults. However, the cancellation of NHS eye appointments means that there's now huge demand for the product in paediatrics and also in urgent care, so we have been redeveloping our core tech for this purposes:

1. Home-monitoring children's vision for those undergoing at-home patching treatment for lazy eye (amblyopia)

2. For one-off urgent use during tele-ophthalmology video consultations

Our technical work is nearly complete for our iOS product on Apple devices, however we urgently need to create an Android version for Samsung and Huawei phones, in order to meet NHS demand in an equitable way. In addition, we must urgently create an automated 'on-boarding' procedure for easy registration online. This means quickly doubling the size of our tech team to build the necessary stable and scalable platform.

Last year NHS England had 7.86 million eye care appointments, just 3.7% which were seen by tele-health means (usually a telephone call to check on the patient's symptoms post-surgery). Given COVID-19, a full roll-out of tele-health is now essential, but the limiting factor is the ability to accurately measure sight in the home.OKKO's patent-pending technology specifically meets this need, and it's integration could ramp up the ability to deliver proper eye care during COVID and mitigate the effects the growing backlog of cancelled appointments and the continued impact of social distancing (ie doctors with asthma/diabetes who are shielding could instead be running clinics from their home). With the correct product acceleration, our technology could be used to raise the tele-health in ophthalmology to 50% by late 2020 and utilise the eye specialists who are shielding.



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NPLAN LIMITED	The use of data and AI to identify opportunities in construction project slow downs and restarts	£49,852	£49,852

The construction sector, encompassing contracting, product manufacturing and professional services, had a turnover of around £370 billion in 2016, adding £138 billion in value to the UK economy -- 9% of the total -- and exported over £8 billion of products and services.

However, the potential of the sector has been held back by productivity that is historically below than the wider economy -- an average of 21% lower, since 1975\. With a pipeline of £600 billion in infrastructure projects, construction makes a critical contribution to the progress of the UK economy.

Impacts as a result of COVID-19 have resulted in a dramatic slowdown to the industry with projects either slowing down or shutting down entirely. A vast majority of these projects will soon be expected to resume to normality.

The tension of slowing down and restarting a construction project looms within the complexity of the operation, including effects of the supply chain. It is highly likely that a vast majority of projects will incur significant impacts to their final cost, schedule and benefits case.

This project will use data from across the UK's construction industry to identify areas of opportunity within projects, to enable slow downs and restarts to be done as seamlessly as possible. The project will help identify risks in proposed plans, expose them to the project team and help benchmark each project against its cohort, to gauge competitiveness or antifragility.



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AVIATION WORKS LIMITED	Medical Optimised Gasmix System	£49,544	£49,544

Aviation Works is an exciting early-stage venture at the intersection of medical technology and aerospace. We have developed technology which rethinks the science behind human performance, safety and survival in various critical situations.

We are developing this technology into a medical device that has the potential to improve the safety of patients during a variety of different clinical procedures, including patients undergoing general anaesthesia and certain surgeries.

Furthermore, we bring a new approach to product development to traditionally slow-moving industries. We are building a lean organisation in a fast-paced start-up environment so we can rapidly develop innovative products and get them to market quickly.



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TOUCH-LESS HYGIENE UK LTD	Development of an electrostatic sprayer device to be utilised for environmental decontamination in the Healthcare Estate and Ambulances and Transport	£49,843	£49,843

This project is to design and within 16 weeks start manufacturing portable electrostatic spray devices which can be used for environmental decontamination in any part of the Health Care Estate, Ambulances or any positive COVID-19 location.

We are a specialist decontamination company who operate in this sector using a device that was originally designed and manufactured in the US. The option to purchase more of these devices is currently not available. Therefore, we wish to design and manufacture a new unit with enhanced capabilities that can be used to safely decontaminate environmental and vehicle locations.



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FABRICNANO LIMITED	Synthesis of DNA primers for COVID-19 testing	£49,931	£49,932

The key to reopening the economy in the U.K. will hinge on the ability to test widely for COVID-19\. The most reliable testing method currently available (rtPCR) relies on DNA primers to run the biological reaction necessary for the test. Global production capacity for DNA primers is already strained, and, by the end of June, there might be a global shortage. In order to return to normal life, the U.K. needs to test, and in order to test, it needs readily available DNA primers. We have a fast and novel method to make that happen, and need funding to develop it to clinical-grade standards.

rtPCR tests are the world's most accurate and reliable tests; their availability is critical. The world is preparing for 10x more testing, which is essential to allow for safe returns to commerce, education and work.

At a high level, the test works when: 1\. sample placed in a lysis solution, 2\. cells are broken down to release the viral RNA, then RNA is combined with DNA strands ("DNA primers") and an enzyme, 3\. the enzyme will only replicate the RNA if it forms a match with the DNA, thus detecting COVID-19+.

Because the test is on a microscopic scale, 1g of DNA primer can fuel ~100,000 rtPCR tests. Our estimate of global DNA primer production capacity is ~50 grams/day using solid-phase synthesizer machines (5MM tests/day). That means it would take nearly four years to synthesize enough DNA primer to test everyone on the planet, and if we were somehow able to obtain just 10% of global primer supply it would take four years to test once every person in the U.K. Without a new COVID-19 DNA primer production method, the UK will struggle to meet its testing targets and reopening the economy will be delayed or disastrous. At FabricNano, we have been developing our capacity to cheaply mass-produce DNA, and we made a breakthrough innovation that allows us to bypass all current supply chain disruptions to manufacture DNA from an entirely new input reagent. Our prior go-to-market business plans did not include diagnostic-level quality controls, and we need funding to add these controls to our production of DNA primer for COVID-19 tests. After implementing quality controls, we will partner with existing test manufacturers to ensure future demand is met in the UK and worldwide.



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MAXWELLIA LTD	Project Covima: A reclassification application to widen access to a medicine that enables pharmacy to support a major public health need, where services are massively disrupted by C19, with significant societal impact	£49,749	£49,749

* Helping pharmacists to plug the void in contraceptive services that has resulted as an outcome of the C19 pandemic where access to GP's and sexual health clinics has been severely disrupted with some services suspended altogether. The effect of C19 on the unborn child is currently unknown. * Maxwellia aims to submit a reclassification application to widen access to an oral contraceptive pill to make it available for women to buy in a pharmacy

without the need for a doctor's prescription.

* This involves:

1. The design of a realistic and deliverable pharmacy supply model

2. Procurement of a suitable marketing authorisation from a contract manufacturer

3. Designing and preparing the key components of the reclassification application for the drug

4. Submitting the application to reclassify the drug to the UK regulator (MHRA)

5. Addressing MHRA concerns to overcome them

6. Managing the process to its successful conclusion.

* This will enable more women to access contraceptive services more easily and save money for the NHS by potentially reducing the GP appointments needed to service the 3.3 million prescriptions that are issued for this type of drug each year at an estimated cost of £99m.

* Project Covima will help reduce unplanned pregnancy which currently costs the NHS £240m per annum and is set to rise due to C19 where a baby boom (the coronials) is predicted as a result of C19, adding further pressure to the NHS with resultant increased costs for the nation.



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B.P.P. TECHNICAL SERVICES LIMITED	Aerosol Mist Separation Units for Enhanced Personal Protection in Indoor Environments	£48,667	£49,647

Preliminary results on the diffusion of the novel virus SARS-CoV2 indicate that aerosol particles carrying the virus can remain in the air longer than was originally thought. Whilst it is accepted that large particle droplets from coughs, sneezes and exhaled air would drop to the ground within 2 metres, there is evidence that when the water around very small particle droplets has evaporated, these particles can travel some distances in air currents. A recent study conducted in Finland "(Aalto university; Ville Vuorinen, Antti Hellsten et all.; 6/04/2020)" further states that coronavirus is transported through such extremely small airborne particles.

The current Covid 19 emergency has pushed everyone to be more aware of air quality that surrounds us. Indoor environments play a fundamental role in the fight against this novel disease. In past decades, several studies have shown that pollution levels indoors can be greater than in the street of a busy city and have linked poor indoor air quality to serious human health problems, such us cardiovascular disease, anxiety, respiratory problems, cancer and many others. Poor indoor air quality directly affects human defence system, increasing the risk of infection by pathogens. An American study "(J TheGuardian "Air Pollution"; Damian Carrington; 7/04/2020)" shows that air pollution is linked to significantly higher rates of death in people with COVID-19 and to a higher virus spread rate.

BPP engineers are developing an adaptation of an existing technology that will remove small airborne water droplets that may transmit SARS-CoV-2 virus loads from air in indoor spaces. This has the potential to further reduce the risk of transmission over and above what is delivered by social distancing and by wearing PPE. This device will be designed for use in hospitals, GP surgeries and care homes and other similar treatment and care locations where an additional layer of virus transmission prevention is desirable.

The end point of the project is to obtain a design that can be rapidly put into manufacture in time for contributing to reducing infection transmission rates in the next phase of the pandemic as lockdown restrictions are gradually relaxed.



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GREEN CUSTARD LTD	Developing key technologies for a Virtual Recruitment Platform	£49,231	£49,231

This project will develop key technologies for a digital recruitment platform centred around virtual recruitment fairs. Its purpose is to bring together businesses and job seekers in a more efficient, safe, convenient, and scalable way than is possible with traditional methods. During the current Covid crisis, such a platform would already have been invaluable to help industry recruit en-masse and spontaneously (eg. supermarkets). Beyond the current crisis, we anticipate the platform bringing benefits and features that were previously not possible through traditional methods of recruitment. We will be commercialising the platform and have an exciting roadmap planned.

Crude attempts to solve the problem have emerged elsewhere such as the use of webinars, but these miss the potential of a bespoke platform with features targeted at recruitment. For the user, the platform will create the experience of a traditional recruitment fair, browsing multiple employers and the ability to speak (with video) to company representatives and ask questions. Information can be exchanged, such as digital brochures in one direction and CVs in the other (anonymously if desired). A structure and workflow around the application process, with innovative automated checks, will streamline the vetting process for employers.

For convenience, all users will be able to access the platform from either desktop or mobile devices through their browser, without the need to install an app. However this brings technical challenges, and solutions need to be developed and tested to see if appropriate quality and latency metrics can be achieved. Uncertainties around issues of scale also need to be resolved.

We want our platform to contribute to post-Covid economic recovery, helping employers find the right people, and job seekers get back to work, perhaps finding opportunities they might otherwise have missed. We want to push what is technically possible and our innovative approach to streamline the process and open new possibilities for all. We want to do our part in helping the country get back on its feet more quickly with the right people in the right jobs, operating more competitively.



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EQUILIBRIUM MARKETS LIMITED	Scale proven concept software to meet UK dynamic food procurement need for public sector	£49,970	£49,971

The Covid-19 lockdown has resulted in large numbers of SME food producers across the country being put at risk if their business was overly concentrated on a heavily impacted customer base. SME primary food producers in the UK need help to reach new customers by diversifying their supply channels. Historically, a very low proportion of SME food producers have been able to access public sector customers due to prohibitive barriers to entry. UK food security is highly dependent on the presence of SME food producers in every region of the country.

Our vision for this project is to facilitate UK-wide, SME-inclusive, dynamic food procurement, fulfilment and delivery capabilities for public sector food buyers.

Our objective is to divert \>33% of UK public sector food and drink spend to fresh, local produce from sustainable SME producers and suppliers by 2023\.

The main area of focus for this project is to transition a proven technology platform that pioneered dynamic food procurement in a pilot project in Bath and North East Somerset (BANES) to scale by making it available for use in all regions across the UK. As such, project funds will be used to accelerate the development of our existing platform:

- * to be ready to be used in multiple regions
- * to be used by 3rd party logistics providers
- * to provide enhanced functionality to manage fulfilment from more SME producers with higher complexity of fulfilment capabilities

Dynamic Food Procurement enables government to procure food directly from a range of primary producers. It enables the procurer to buy food at the point of order with full supply chain transparency. This enables buying decisions on the production of food which, in turn, can enable producers who are producing food sustainably (environmentally friendly, biodiversity friendly and socially responsibly) to grow their business by receiving orders out of the £2Billion spent annually on food ingredients within the public sector. It means that many SME food producers that couldn't previously supply the public sector, can now do so.

So, there are multiple benefits of dynamic food procurement. These include:

- * improved food security, transparency of provenance and accountability within food supply chains
- * improved performance on energy, waste, social and environmental factors of food production including animal welfare
- * reduced diet related disease burden
- * a supply chain to deliver food to vulnerable individuals
- * boosted regional economies in every region of the UK
- * improved value and reduced cost for public purse



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HEALIOS LTD	Mental Health Clinical Delivery Platform	£49,607	£49,608

The global disruption caused by Covid-19 has forced mental health (MH) professionals to see their clients via the internet, mainly using videoconferencing platforms (e.g. skype, zoom) which were not designed for the delivery of a complex range of interventions. Our project is designed to meet a need identified by MH managers and clinicians for a specialised clinical platform which ensures a remote workforce has the essential tools for safe, efficient and effective clinical operations.

Healios is a unique digital healthcare services company that specialises in the online delivery and integration of complex mental health, autism and ADHD services in partnership with the NHS. Over the past 7 years our clinical and technical team has developed a bespoke secure clinical platform, called 'Panacea', that is purpose built to specifically manage and deliver complex MH services remotely in a safe, effective and efficient way. Healios clinicians use Panacea to deliver NICE concordant assessments and psychological therapies. People can receive a wide range of high-quality services online in their homes at times which fit in with their daily lives. In addition to the features which facilitate remote clinical delivery Panacea also enables patient flow management, service oversight and the recording of patient outcomes.

Since Covid-19, we've received a number of requests from NHS MH Trusts to licence our specialist platform to support their emergency service continuity plans and their future new care models. To meet these urgent requests from our NHS partners, Panacea would need converting into a 'Software-as-a-Service' (SaaS) product for external use.

Therefore, our key objective for the project is to create a commercial ready SaaS version of Panacea. The funding will be used to convert, test, evaluate and refine a Panacea SaaS prototype product within an NHS mental health trust that has agreed to be a pilot site.

Healios is commissioned by nearly 50% of NHS MH Trusts in the UK which has resulted in Panacea being thoroughly tested in real-life settings across a wide range of UK MH clinical pathways. Our clinical and technical team has the experience of developing the original Panacea platform and is able to undertake the project within the required timescale. We require public funding to speed up the development of our SaaS version of Panacea so that it can be used by a wide range of NHS mental health services and its unique features can benefit as many people as possible.



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SYMPHONOVA UK LTD	Online Orchestral Stem-Production Service	£47,922	£47,922

CONTEXT

In films, computer games, television, etc., orchestral soundtracks are one of the most powerful tools to shape emotional impact. During the period of Covid-19 working restrictions, musicians, engineers, production studios and others cannot work, so most orchestral soundtrack production is on hold.

Following the pandemic, producers will have to find ways to reduce costs while maintaining quality, especially if the UK is to be competitive in global markets.

OUR VISION

Our project will deliver an online service that enables users to easily create high-quality, industry-standard recordings of instrumental groups ('stems'), that are combined ('mixed') into a final soundtrack. The service will be intuitive, affordable and quick.

During the pandemic, musicians will be able to participate in the production of Stems from home. That will enable producers to deliver high-quality recordings, thereby reducing the pandemic's financial impact on the industry.

Following the pandemic, the service will alleviate some financial pressures on the UK media industry. It will continue to increase employment opportunities for British musicians and other recording professionals, and simplify production processes.

HOW?

We can create this service by implementing technology that has been proven in live performances over the course of the last three years ([www.symphonova.com][0]). Our technology uses conventional recording techniques to capture musicians' individual musical expression from their recordings, and applies it to virtual instruments. The process is unique, unprecedented and transformational for the industry.

IMPACT

Using our technology, high-quality full orchestral stems can be created with a small group of musicians. With the lowest production cost for stems, it will make British musicians highly competitive in an industry that frequently takes the work offshore or uses computers to replace humans. Even small-budget media projects seeking an original orchestral soundtrack will be able to afford British musicians. Beneficiaries will include all UK music-production stakeholders, who will be more competitive in the global market, and thereby have significantly increased work opportunities. The widening of a competitive export revenue stream will contribute to strengthening the UK balance of global trade. And global audiences will enjoy improved content.

Britain has a long history of excellence and introducing innovation. We are grateful to have the chance to be part of that tradition.

[0]: http://www.symphonova.com/



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LIKIDO LIMITED	Re-purposing, environmentally damaging HFC cryogenic chillers to environmentally inert natural refrigerants, for process chilling in the post Covid-19 pharmaceutical industry.	£43,006	£40,000

Over the next few months, UK pharmaceutical companies and institutes will need to develop anti-viral drugs to help overcome symptoms and vaccines to protect against and help combat the devastating effect of the COVID-19 virus.

Novel manufacturing techniques such as continuous processing, together with the safe low-temperature storage of vaccines will be required. These processes require temperatures between -50 and -80°C to operate correctly.

Currently, mechanical compressor-based low-temperature refrigeration systems use high cost \[£690/kg\] environmentally damaging HFC refrigerant gases. These gases under the UK-EU and UN climate change policies are legislated to be phased out over the next 10 years.

Likido currently manufactures low carbon, high-temperature industrial heat pumps that use a non-toxic, non-?ammable, environmentally inert, CFC/HFC free "natural working ?uid". Using Likido's experience in natural refrigerant technology and its unique two-stage compressors design, Likido over the next 3 months plan to fast track the manufacturing of a new range Cryochillers which will use HFC free "natural refrigerant gases that can operate down to -70°C and have global warming potential \[GWP\] of less than 50\.

This new innovation will ensure safe production and storage of medicines and vaccines at low temperatures and keep the UK's government commitment to climate change legislation.



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VIAPONTICA LTD	Safely Social – Healthy People, Healthy Economy	£49,989	£49,989

Safely Social is an AI solution to help individuals abide by the social distancing rules required in the wake of the Covid-19 pandemic. Challenges to enforce social distancing are felt in supermarkets and parks, where the public aggregates currently, but as the economy reopens in the coming months, social distancing will need to be enforced on a larger scale in public spaces such as train stations, public buses and airports. The current project aims to demonstrate the feasibility to take an automated, proactive and targeted response to achieve social distancing. We propose to test the effectiveness of deploying a combination of AI-enhanced CCTV with personalised public announcements. The idea is that individuals, who are too close to one another, can automatically be prompted to observe social distancing based on CCTV readings. A significant benefit of the approach is the low cost to adoption since the capital infrastructure, such as cameras is already in place. In addition, the solution could reduce staff exposure to COVID-19, reduce sick leave, and free abstracted human resources.



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LOCATION EXTREME (UK) LIMITED	GPS device and cloud based analytics platform for monitoring and tracking of vulnerable Covid-19 patients	£48,562	£48,563

Our project aims to strengthen the country's capabilities in the isolate and trace phases of its response to a pandemic via the use of innovative GPS and Cloud technology, enabling healthcare authorities to better monitor the status of patients in isolation and the tracing of patients post-testing positive for the virus.



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VERTIGO VENTURES LTD	Curating cross sector expertise for sharing insights & discoveries for pandemic resilience	£49,871	£49,871

The COVID-19 pandemic has brought unprecedented challenges in a very short timeframe. It has required people and businesses to change behaviours and practices overnight. As a result of these drastic changes, it's brought a unique opportunity and an urgent necessity for permanent behaviour change, to define a new normal that can build more resilience into society and the economy for the future. Expertise is key to developing practical solutions and informing policies and now leading experts need to be able to work together to understand the impact of COVID-19 and propose solutions for a new, pandemic-proofed and sustainable normal.

Our proposal will support the building of the new normal and creation of solutions to the crisis by enabling leading experts across the world to collaborate on addressing issues and opportunities arising from the COVID-19 pandemic. Using our existing software, we propose to make key modifications that will:

 Enable researchers, medical experts and key stakeholders (e.g. scientists, researchers, doctors, academics, industry, hospital staff, policy makers) to work freely together on problems and ideas to improve societal resilience in the face of another global public health pandemic.
Enable the benefits or impacts arising from the projects to be freely shared with the general public, businesses, policy makers and others interested in these challenges to inform practices, behaviours, policy guidance to inform a new 'normal'.

A new 'normal' is needed to ensure a better prepared, resilient society and economy to weather a second wave of COVID-19 or another pandemic, and seeks to mitigate climate change.

This project will utilise our existing capabilities and unique competencies as impact reporting experts, our existing user base of over 6,000 experts and existing market leading software technology, which is currently behind closed doors, to open it up to the public through a public interface. This interface will have a COVID-19 specific search function so that you readily find insights, experts and evidence that relates to your query, e.g If you want to understand how COVID-19 has impacted the mental health of the elderly, it would provide you with the relevant projects, experts and information.

This project provides a unique opportunity to provide access to broader society on the impact insights from this COVID-19 pandemic as the information unfolds. This can be used to inform more sustainable behaviours, practices and policies to enable society and businesses to adapt ahead of any second wave of COVID-19 or another pandemic.



Competition Code: 2005_CRD_CO_COVID19_R2

Total available funding is £40,000,000 rounds 1 and 2. £7,000,000 for this round

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
XYLO MEDIA LTD	Peace of Mind	£48,117	£48,117

Peace of Mind is a mental health and wellness website, app and brand which provides users with access to well-being services and therapy on-demand.

Our mission is to help society tackle life's challenges with free and affordable access to therapists and well-being tools via their smart devices.

We want to provide the ability for people with onset mental health to always have access to someone they can talk to with the tools to support their daily mental well-being.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
STEER DAVIES & GLEAVE LIMITED	An online simulation of recovery from lockdown	£49,271	£49,271

Lifting lockdown raises big questions for towns and cities. What happens to transport and employment if restricted categories of people are allowed to travel, for limited purposes? If extended social distancing reduces public transport capacity, will enough people get to work? How long will public transport operators require subsidy? Will fear of public transport cause an increase in car use and congestion? Can future job losses be minimised? What happens when lockdowns are re-imposed?

While forecasting is of limited use in these circumstances, we believe there is a strong case for envisaging future scenarios and rehearsing responses to them to find how to achieve the best possible outcomes, especially for economic recovery.

The aim of this project is to provide a simulation to do this. Steer is an international transport and business consultancy, established in 1978\. For twenty years we have been using an urban simulation, the Urban Dynamic Model (UDM), to help clients understand the relationship between transport, infrastructure investment, employment and economic activity in their cities. Our proposal is to develop a customised version of this model to simulate how cities might recover from lockdown. This model would be made available online for anyone to use without charge, to rehearse how recovery might happen and how to mitigate the negative impacts.

In this way we hope to help city planners, transport operators and others anticipate problems, test out possible solutions, and, using what they learn from the model, design robust response strategies for their own cities.

This is an ambitious project. The scale of the impact of lockdown on the economy is huge, and tools to help achieve even a moderate improvement in future employment and business activity will be of enormous economic and social value. It is also highly innovative, for we will have to simulate conditions and responses for which little empirical evidence yet exists; for this reason we see it as a tool for envisaging and rehearsing future scenarios, rather than a forecasting tool. Putting the model online for general use is also innovative and technically demanding, but with the potential to generate widespread use. We do not intend to charge users, but to ask for donations to organisations fighting COVID 19\.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
FEED YOUR COMMUNITY CIC	Open Kitchens to Feed Those in Need	£50,000	£50,000

With up to 90% of restaurants closed during this pandemic, Open Kitchens connects restaurants & their communities in order to produce & distribute nutritious meals to those who need it, funded & powered by the community. Those in need can access free meals on a live basis, with the option to donate to help others who need meals.

Restaurants cook meals as a charity initiative with a budget to cover the production costs of the meals.

All participating restaurants use a reduced-transmission model developed by Doctor Tristram Lewis-Stempel. Delicious & nutritious food produced for just less than £1.85 including distribution allowing restaurants to cook on-site with meals distributed down the line through existing food redistribution partners. Open Kitchens reduces transmission risk by delivering meals in high volumes with beneficiaries able to request meals on a live basis.

Open Kitchens will increase the likelihood of being able to completely isolate for 3+ months if required by fulfilling the need for tasty and nutritious meals and help get meals to 10 million British citizens who are unable to access regular food supplies, many of which are children.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACORN POLYMERS (U.K.) LTD	Expanding Manufacturing Capacity for the Production of PPE	£49,954	£49,954

To aid PPE shortage due to Covid-19 and reduce UK's reliance on imported materials, we would like to develop a new PPE product and new manufacturing methods, expand our UK manufacturing capability, and redirect part of our resources and assets to:

1. Producing 100% recyclable polymer sheet materials, suitable for production of various types of PPE, including protective face shields. This capability will reduce our and other UK PPE manufacturers' reliance on imported materials.

2. Producing innovative face shields optimised for high-volume production out of sheet materials, low cost, user comfort, and high contamination resistance.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
HAPPYSELF LTD	HappySelf Journal x Children of Key Workers	£48,259	£48,259

We produce and sell a daily journal for children, aged 6 to 12, to promote happiness, develop positive habits and nurture enquiring minds.

Our mission is to bolster the mental resilience of the next generation.

We've sold tens of thousands of these journals to parents, carers and schools in over 100 countries around the world since our market introduction in August 2018\. We're an Amazon \#1 Bestseller and have had the journal translated into seven additional languages.

The journal is based on science backed techniques shown to improve happiness and introduces concepts such as digital resilience, journaling, mindfulness, expression of feelings and gratitude practice.

One of society's big fears is the effect on mental health of those currently impacted by the 'lock-down', especially children.

Currently, we're receiving lots of feedback from parents about how the journal is helping their children through the 'lock-down' and supporting their mental well-being through this difficult time.

Our aim with this funding will be to get this journal into the hands of all the children of key workers currently spending their days at school. We believe this will have a positive impact on their mental well-being and help support them to the other side of this crisis.

On our side we'll provide the journals (at cost), provide the operating and marketing expertise (and use our own social channels) to find the schools and children, we'll administer the programme and organise the logistics of getting the journals into the right hands.

If our application is successful and we are awarded the full grant; we estimate that we'll be able to affect a significant number of lives. That's not going to be all of the children of key workers, but it will be a good start.

You can find out more about our journal at [https://happyselfjournal.com/][0]

You can see the real life impact we're having on the lives of those who use the journal on the reviews page: [https://happyselfjournal.com/pages/reviews][1]

[0]: https://happyselfjournal.com/[1]: https://happyselfjournal.com/pages/reviews



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
GET HERD LIMITED	Frontline insights to create efficiencies in healthcare	£48,914	£48,914

Surfacing employee voice of frontline NHS teams.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
LATENT DRIVE LTD	The Oxygen Cell Project	£49,832	£49,832

_Deputy Chief Medical Officer Jonathan Van-Tam says the requirement for oxygen for coronavirus patients is extremely high and a "logistical challenge" particularly in care homes and ambulances. There have been "one or two reports of where something has gone slightly wrong with an oxygen supply"_BBC News 10-Apr-20\.

Hospitals are reliant on a limited infrastructure for distributing compressed oxygen for treatment of Covid-19\. The oxygen is stored in large central tanks and distributed by fixed pipework. Normally this pipework is only installed into operating theatres and intensive care wards. Extra wards are urgently being converted -- but the installation of new pipework delays this work. Bournemouth and other hospitals have reported freezing of oxygen pressure regulators as exceptional flow rates are demanded, beyond the capacity of their distribution systems.

The situation is especially difficult in care homes as they lack the plumbing and tank installations to supply continuous oxygen. Instead portable oxygen cylinders are used -- which need to be frequently exchanged or recharged.

Latent Drive Ltd are developing a compact Oxygen Cell to supply oxygen to individual respirators, drawn from the atmosphere -- entirely independent of the normal hospital supplies. We apply existing Electro-Chemical Compression technology in a novel way, using methods developed in other applications. This technology is inherently compact and efficient compared to traditional compressors, and is suitable for a small portable unit.

The immediate need is to meet the UK government _Rapidly manufactured ventilator system specification_ for gas and electricity supply, with a selfcontained device that can be plugged into existing hospital ventilators. The Oxygen Cell is different to an oxygen concentrator as it will directly plug in to any ventilator, using NHS standard quick connect couplings, and provide pure oxygen at 4 bar. The project will progress rapidly from prototype and into production using 3D printing techniques to make parts without delays for tooling.

In the longer term we are seeking partnerships with established ventilator manufacturers to make an integrated portable product -- which will be selfcontained and provide its own oxygen supply. This will be ideally suited to care homes which do not have the infrastructure to supply oxygen.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
UNIFAI TECHNOLOGY LIMITED	Supporting critical food supply chains	£49,914	£49,913

Maintaining food supply chains during the COVID-19 crisis is critical.

Workers in this sector are being asked to stay at work for the benefit of their local communities, and the entire country - from supermarket employees to delivery drivers and more.

Keeping critical food supply chain workers safe, customers safe, and communities safe is essential. This has to include targeted and voluntary COVID-19 testing. To be most effective, this should include the ability for tests to be sent to key workers to conduct at home.

At-home testing has to pass a "usability" test. It has to be easy enough to use and interpret by an ordinary person at home.

We are creating a "digital supervisor" in the form of a smartphone application that takes the user through conducting the test, step by step, using pictures, video and clear instructions. Most importantly, we are using AI to read and interpret the test results, significantly reducing human error. Then the results are automatically collated in a platform/dashboard for mapping and analytics, integrating data from multiple testing methods.

If successful, this approach can improve the "usability" of testing, and can unlock at-home testing for critical employees in the food supply chain.

This capability will be equally important for other key workers, including people providing critical transport or council services, and more.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE RATTLE LTD	Real-time High-Fidelity Synchronous Audio Recording & Production Across Domestic Broadband	£49,940	£45,000

We have designed and intend to create a compression, transmission, and workflow technology to enable audio producers and artists the ability to synchronously (in real time) collaborate and record audio together from remote locations across domestic broadband with lossless quality audio. Or, put simply, we have designed the technology and workflow for a remote-music-studio by linking home-studios together that perform as well as a commercial studio. This is a game-changing approach to music making, performance, and cultural expression that not only addresses a real and pressing issue in the entertainment and cultural industries caused by Covid-19, but also provides a forward-thinking innovative new approach to audio studio design. This experience is enhanced with personalised postage of any equipment necessary for the artist in question to record to a professional standard.

Our key objectives are:

- * To productise a prototype of a low-latency compression & transmission technology for remote lossless audio collaboration
- * To test and develop a workflow that integrates the technology into artist & producer projects without learning any new systems
- * Enable sound professionals who support artists, to keep supporting these key culture makers remotely.

Currently, collaborators on audio projects that aim for a high production value audio (music artists, professional podcasters, entertainment producers, music producers etc.) must be in the same physical location in order to record and produce works together. The workflow for such projects tends to be:

- 1\. Write/develop material
- 2\. Produce, Record & Structure audio material
- 3\. Mixing/preparing audio
- 4\. Publish Audio

Many artists and creators of culture are now in a near-impossible situation due to restrictions placed throughout the Coronavirus pandemic when it comes to collaborating on writing, recording, and producing audio in real-time.

There are a handful of good technologies solving remote-collaboration of audio asynchronously (not in real-time) but these technologies cannot recreate the creativity, social engagement, cultural meaning, and collaborative artistry that can only occur when two or more artists work together in real-time.

We believe that by successfully creating a compression, transmission, and workflow technology to allow synchronous recording and production of audio across home-broadband without loss of quality will rekindle the creative output of those artists suffering from lock-down, and also provide an innovative new technology and workflow liberating a new home-studio economy post-Covid. Never has it been more important to allow culture to thrive through the arts.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE BRISTOL LOAF LTD.	Bristol's Producer-Led Online Market	£49,798	£49,797

To avoid repetition, we confirm that we are happy for the Project Summary to be used as the Public Description, there is no confidential information and a non-specialist would understand all of the information included.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
FINSEN TECHNOLOGIES LIMITED	Nanowave - Covid-19 Hospital decontamination using UV light	£49,903	£49,903

The decontamination of near patient electronic equipment on hospital wards is currently insufficient to prevent the spread of Covid-19 in the healthcare setting. It is expensive, time consuming, environmentally unacceptable and lacks efficacy. In addition, the shortage of PPE and the lack of reusability due to cross contamination concerns is making headlines in the news.

As complex electronic equipment becomes ever more prevalent on hospital wards, there is an urgent need for an effective automated decontamination method. Without this, these high touch point surfaces will continue to aid the spread of infection.

Finsen is an SME established to commercialise the use of short wavelength high-energy ultraviolet light for pathogen decontamination. We have developed the concept of a UVc decontamination cabinet for processing portable medical equipment and PPE which promises to help in the fight against Covid-19

The key advantages of the technology are:

• Up to 5 times quicker than existing best methods such as manual cleaning

Repeatable and validated process with feedback and cycle logging

• Reduction in hospital-acquired Covid-19 infections and death



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
OZONE INDUSTRIES LIMITED	Pro3tec	£49,602	£49,602

PRO3TEC is a project looking to improve the disinfection needs of the ambulance service. By speeding up the time of disinfection and reducing staff sickness resulting from exposure to microbiological hazards PRO3TEC will provide the NHS with a more cost efficient ambulance service.

The project will also provide a springboard to develop related transportation and room disinfection applications.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
AGPLUS DIAGNOSTICS LTD	AgPlus Electrochemical COVID-19 Diagnostic Assay	£49,498	£49,498

SARS-CoV-2 or COVID-19 is currently spreading throughout the world. Little is understood about the virus but we are learning fast and it is clear that we need to have good, accurate diagnosis to support quarantine and treatment.

What is known is that the virus has a serial interval of 4 days and 1-3% of the population may be pre-symptomatic but still transmitting the virus. It takes 2-14 days to show symptoms after infection with the 97% of people developing symptoms within 11.5 days. This is a global challenge to halt the spread of the disease before our healthcare systems become overwhelmed.

AgPlus' diagnostic assay for detecting specific immune responses to the COVID-19 virus will allow for a) confirmatory testing (rule in rule out) of those with symptoms, understanding that in some instances the symptoms may be due to bacterial infection b) monitoring treatment efficacy in those that have tested positive to ensure they are responding and when safe to release from isolation c) potential to be a companion diagnostic to support drug/ vaccine development d) test to confirm if patient has previously been infected with COVID-19\.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
TCT - EUROPE LIMITED	Covid 19 Lockdown Recycled Rubber Project: UK MOD plastic replacement	£48,328	£48,328

Public description

TCT-Europe is dedicated to making profitable use, of recycled rubber from used tyres, and its use to displace, where ever practicable, plastics, virgin synthetic rubber (made from oil) and virgin rubber. Presently we make mostly bespoke products for the solar and heating, ventilation and air conditioning (HVAC) industries. We do this in large volumes that save a very large number of tyres from ending up in illegal landfill or being burned. This project is designed to expand this ambition to the military, where we believe there are a large number of items that could be made more effectively for the tax payer, as well as the planet, from recycled rubber.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
RMJ Textile and Print Studio	Virtual MVP ECommerce Artwork 3D Visualiser Plugin for overseas and UK trade within the fashion and lifestyle industry	£50,000	£50,000

This projects aim is to design a Virtual 3D MVP plugin. It will create a simulated and stimulated sales environment. The site will create an immersive environment that, currently, customers do not experience on e-commerce sites. The interactive 3D world of this software will provide the client a compelling real-time experience.

Essentially the client would log in to our online virtual trade stand to view the latest fabric collection, through a virtual rail of fabrics. The customer would then be able to manipulate the print designs in a 3D Virtual world.

We will work with a Digital Design Company to produce the virtual e-commerce model.

Ultimately the project will develop a marketable plugin that we can sell to our competitors and retailers. At present design studios sell very little of their artwork online, currently they show case designs in a flat 2D format, not 3D. On line sales of artworks in the fashion industry are minimal, but there is a gradual and, we believe, growing demand not only due to covid19\. Our continued research and discussions with buyers show they are not 100% confident with purchasing artwork in a 2D digital format, the preference is to see the artworks in their "live" format. We will aim to fill that gap.

Currently the world of fashion has a huge issue with sustainability and its environmental effects of pollution and climate change. This unique Virtual-Retail experience would have a real and considerable positive impact on this. Its _affect_ will be to give print studios around the world the ability to "virtually" trade their artworks overseas. The result being a reduction the need to travel for trade and reduce fabric sampling, thus creating a positive _effect_ by reducing its carbon footprint. It will also provide a contingency plan in light of the current Covid19 situation and Brexit.

The need to improve climate change together with a growing willingness in the fashion world to change and adapt has, together with the covid19 global pandemic, created a real need for a new and innovative way to trade artwork and design. Therefore, we are certain this innovative 3D Virtual Reality retail/sales experience would be a leap forward in the world of fashion and a valuable resource solution to solving these considerable challenges.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
KINFO LIMITED	Kinfo, The TripAdvisor For Kids Literature	£49,086	£49,086

Kinfo is the first recommendation platform for and from parents. Families share on the free app Kinfo (available for iPhone and Android) what their children like, and why. Parents can then access to thousands of genuine recommendations from other parents without leaving their home.

Kinfo has partnered with parents, teachers and librarians to come up with a list of top books they recommend for their children from Primary School.

During this period of Covid-19, Kinfo wants to help children maintain and acquire reading skills. With schools and libraries closed or operating with limitations, parents need assistance in choosing the right book for their children.

Kinfo app suggests the most relevant books for their children, using a unique and sophisticated tool that captures personal criteria such as the age of the child, what they enjoyed reading before, their school teacher and friend's recommendations, preferred authors and type of stories, and the style of the book. Parents can order and purchase the book in one-click from their local online bookstore.

As bookstores have been closed down due to Covid-19, they need assistance to stay in business. Kinfo will give them access to a new audience of prospective customers, driving additional traffic to their online store.

Kinfo's key objective is to facilitate access to great books for ALL children. Therefore, when parents buy books from their local bookstore with Kinfo, Kinfo will give 10% of its transaction fee to a national charity supporting children's literacy.

Kinfo's project funded by Innovate UK, is the TripAdvisor for kids' literature, helping any children to travel from their sofa with a book. This project is currently rolled out in London but will soon be extended to other cities in the UK. Contact for more information: hello@kinfoapp.com



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
RESTAURANT BOX LIMITED	Restaurant Box - Direct-To-Consumer Multi-Vendor Restaurant E-commerce, Tuition & Social Platform	£49,962	£49,962

The Corona Virus has had a devastating impact on the hospitality industry. Since lockdown, in-restaurant dining has been prohibited with restaurants relying on takeaway collection and delivery or closing.

Even once lockdown restrictions are eased, dine-in will be subject to strict social distancing at 25-50% of usual capacity.

Long term trends of working from home where possible, avoidance of unnecessary public transport, ongoing social distancing legislation and restrictions on international travel mean homebased eating and entertaining trends are expected to continue and develop.

Restaurant take-away is in high growth however demand is focused on peak meal-times with low margins meaning it is not a profitable category for restaurants with limited capacity for growth due to staff social distancing and peak fulfilment limits.

Therefore restaurants will need to be agile and look to new revenue streams to survive and thrive in the post-Corona 'new normal'. Put simply if the customers cannot come to the restaurants, the restaurants need to innovate new ways to reach their customers.

During the Corona lockdown, consumer behaviour has made a seismic shift. Leisure time, experience and entertainment is home based with 81% of the UK population saying they want brands to educate, entertain and engage them. Searches for 'how to cook' are up 600%. Demand for supermarket home delivery is up 40% and recipe boxes have boomed with Hello Fresh reporting a 68% increase in sales.

In response, Restaurant Box is an exciting new destination marketplace for authentic at-home restaurant cooking and dining experiences. Through Restaurant Box customers can order prepped, portioned, fresh and authentic recipe kits from the best UK restaurants from street food, gourmet burger and artisan pizza kits through to Michelin starred recipe kits for local collection or overnight temperature-controlled delivery anywhere in the UK.

Restaurant Box kits are listed with skill level, prep times and cooking times to suit individual cooking ability, ambition and convenience with real-time cookalong videos from top professional chefs to guide home cooks through every step of preparation, cooking and serve.

Restaurants benefit from Restaurant Box by creating a new revenue stream that builds on the increasing demand for at-home cooking and dining experiences which can be prepped at off peak times. National overnight delivery gives restaurants exponential potential to build their new revenue stream with fair margins at retail prices on average 30% cheaper than dine-in creating demand for their business, staff and supply chains.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CAMBRIDGE RESPIRATORY INNOVATIONS LIMITED	COVID-19 clinical respiratory community monitoring system	£49,353	£49,353

We have developed a sensitive handheld breathing monitoring device, just by breathing normally into the device we are able to monitor how a person's lungs are performing. The device has been designed to be used by the young, fit and well and frail elderly and is providing clinical teams with new and insightful medical information on patients.

The devices automatically and securely transmit large data to a secure cloud hosted clinical system that powers our dashboards. The dashboards provide clinical teams with live and trending data on individual patients and groups, within a hospital, or at home.

Our remote monitoring systems help medical teams to manage patients in a timely manner supporting better care that delivers better outcomes for patients and will help teams decide which patients should be transferred to more intensive environments, like ICU, or which could be safely discharge home.

We are deploying our devices into hospitals to monitor patients with COVID-19, the patients will breath into the device 2-3 times a day and the data collected will inform clinical teams on how their lungs are performing, this information is key to making life saving clinical decisions early.

The aim of this study is to demonstrate how our technologies can support clinical teams in assessing COVID-19 patients and monitoring them over time, this information will enable clinical teams to better manage and plan patients care. We aim to demonstrate how our system can save lives, support clinical teams and free up much needed hospital capacity.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
WORKSAFE DESIGN LIMITED	A revolutionary improvement in personal protection equipment against COVID-19	£49,970	£49,970

NHS, care-home and essential workers are dying, due to the lack of effective Personal Protective Equipment (PPE) that stops air-borne infection of COVID-19 occurring through the mucous membranes of the head. Our innovation is an anti-virus, air-fed hood (AVAH), that covers the head and provides virus-free air to the wearer, thereby blocking this virus-transmission pathway. Our AVAH is better than current healthcare PPE, or industrial-use Powered Air-Respiratory Protection (PARP) units, because it is more comfortable and effective, has all-round visibility, is quiet to aid communication, modular (therefore easy to clean) and some components are already in large-scale production.

The AVAH consists of a personal aspirator that comprises of a fan, which pulls air through two stages of filtration. The primary filter catches mist droplets and large dust particles. The inner high-efficiency particulate air (HEPA) filter catches smaller particles. The fan is powered by a rechargeable battery and delivers air, via a silencer, via a flexible hose to the hood. The hood is inflated by the pressure of the air. Excess air is exhausted and filtered through the hood's permeable cuff. It also has simple controls and alarms to ensure user safety.

We have two key objectives, which are to: (i) initiate pre-production 'field' trials and market testing using a modified industrial fan/filter system in conjunction with our novel hood design, (ii) design, test and certify of our own fan/filter unit optimised specifically for healthcare use, reduced cost, better usability and improved resilience against supply chain problems. We shall proceed to mass manufacture of the AVAH, with a goal of producing thousands per week.

Our focus areas are the design, development and mass production of our AVAH, for use both here and overseas. We foresee multiple additional applications for modified versions of our innovation, including protection against hay-fever and use by other public servants, e.g. prison, police and border control officers, where staff could be exposed to infectious, respiratory diseases such as tuberculosis.

The WorkSafe Design AVAH is innovative, because its design is modular and it solves the numerous problems and stresses associated with commonly used facemasks, visors or industrial PARP units. Feedback from clinicians and care workers has been extremely positive, because they were impressed with the AVAH's virus protection capability, lightness, quietness and all-round field of vision.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
TRICHOCARE CONSULTING LIMITED	Harnessing the power of the UK's hair and beauty professionals to promote self care and welfare in the community	£48,286	£48,286

TrichoCare believes the UK's influential hair, beauty and barbering profession can make additional positive contributions to our nation's welfare, by participating in health and science training.

40,000 hairdressers, barbers and beauty therapists, as an industry, have been hit hard by Covid19 disruption making them unable to practice. Social distancing and the need to minimise cross-contamination will require adoption of totally new practices for the industry when restarting. Consequently, self care principles for both practitioners and their clients need to be widely communicated and adopted.

Having been at the forefront of science and health training for almost a decade, Trichocare will design and develop a new online educational programme designed specifically for hairdressers launching in just 3 months with the support of Innovate UK. Courses will be a blend of free and paid-for training and qualifications. All will be delivered online using our new Virtual Learning Environment.

This will enable the UK hair and beauty industry to rapidly restart with appropriate virus control measures in place to ensure the wellbeing, health and safety of both staff and clients.

"Government's long term plan is to support people to manage their own health, tackling health inequalities and reducing pressure on services. These changes should mean that the NHS can start to tackle some of the underlying pressures it faces." _(www.longtermplan.nhs.uk)_

Hundreds of Hair Professionals have participated in Trichocare's Ofqual Qualification in Trichology. Our unique expertise and reputation within this specialised market can be deployed to deliver wider and longer-term societal benefits (outputs) by:

1. Promoting welfare and self care messaging to the millions of clients treated each week by in salons

2. Encouraging healthcare interactions to be with pharmacists rather than GPs, saving NHS millions (unnecessary use of NHS services costs an estimated £2.3 billion a year)

3. Improving the value and loyalty of Hair Professionals increasing profitability and sustainability in one of the hardest hit sectors of the UK economy responsible for a £6bn contribution to the UK economy in 2017\.

The short-term immediate promotion of the initiative within and outside the sector will contribute to its much-needed revival with new safety measures in place to control the virus. Longer term socio- economic benefits will see Hair Professionals promoting better health decisions and more efficient interactions with primary healthcare services.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
HEALTHMINE LTD	Matching people virtually with their right mental health professional for better care. Anytime and anywhere	£49,289	£48,000

HealthMine provides an easy and effective way at finding suitable health specialists for your unique needs. Affordable online consultations with health partners perfectly matched for you. Anytime, anywhere.

When you suffer from life's challenges and need mental health support, you can face difficulties in finding the right therapist who gets you. It is a huge problem to find support that is suited to you, culturally sensitive and convenient.

HealthMine uses Artificial Intelligence to match you with a specialist who understands your unique needs, and you can talk with them anytime and anywhere in the world. You benefit from personalised, affordable and convenient care to improve your health and live your life more fully.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
WOMAD FESTIVALS LIMITED	WOMAD:HOME (Hear Original Music Everywhere)	£49,836	£49,836

WOMAD (World of Music, Arts and Dance) is a long established and award winning festival that currently takes place each year in the UK, Australia, New Zealand, Spain (Caceres & Las Palmas), and Chile and has extended the programme to over 30 countries globally in its history. WOMAD:HOME (Hear Original Music Everywhere) is set to be a series of online concert experiences, featuring musicians from the UK and around the world, live-streamed to people's homes. The series will be in partnership with the experienced sound engineers at Real World Studios and live sound experts d&b audiotechnik - known for their Soundscape immersive sound system. Together we will deliver beautiful and immersive 360-sound, designed for headphone listening.

Curated by WOMAD's festival producers, the quality of the performances will be outstanding, featuring some of the best musicians the UK has to offer. There will be eight concerts, one a week, available to watch online free of charge and worldwide. All of the musicians' recordings and post-production will take place within the working restrictions of COVID-19\. WOMAD:HOME will feature non main-stream artists (lineup TBC) who have had performances cancelled.

WOMAD is renowned for finding 'the best music you've never heard' - the WOMAD: HOME Concert Series will be no exception.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MAGE CONTROL SYSTEMS LTD	Wall mounted multi-technology hand sanitiser	£49,293	£49,293

Our vision for the project is to create a chemical free hand sanitiser using a blend of proven sterilisation techniques in an innovative and new way.

The key objective is to rapidly develop a wall mounted hand sanitiser that could be used in clinical, business and home settings to provide rapid hand sanitation.

This innovation would look to employ a time dosed exposure to non-chemical agents around the hands for improved surface sterilisation.

Because the device is contactless, it would utilise NFC technology so that it can only be used by people who are trained in the proper method of sterilisation.

Sterilisation can also be tracked by linking the units to the any local or distributed network and integrating this into the recording management systems (typically using HL7 Protocol in hospitals).

For non-clinical settings, a Human Machine Interface (HMI) can instruct users on correct usage without the need for an NFC tag.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE HUB COMPANY LIMITED	Apollo mobile COVID -19 Passport ID platform	£49,448	£48,835

The Hub launch a mobile COVID -19 ID platform for NHS test certification:

* This is a government level mobile ID security certificate issued instantly following test results to help manage the COVID-19 exit strategy & return of key staff back to work.

* The Hub software platform is called Apollo, uses government and banking backed security systems to issue both secure digital and/or physical certificates proving immunity, or non-infected or vaccine results following the COVID-19 Antibody or Antigen testing.

* Allowing non-infected and immunised key workers and members of the public to return to work faster.

Mobile COVID-19 certificate instant issuance - _Highly secure QR code for instant mobile issuance_

* Once the test result is confirmed by any authorised testing lab, or by the authorised tester present when the antibody test is conducted. A result of 'non-infected' or 'immune' triggers an instant highly secure QR code certificate delivered to the app or issuance of a physical certificate e.g smartcard.

* This can then be shown or scanned for verification to ensure authenticity and thus allow that key worker / member of public to return to work.

* QR Code Security Features:

* Secure algorithm dynamically changes the QR code every 20 seconds. So any copy made would only be valid for 20 seconds

* Interactive movement of security features (moving element around a screen finger touch -- so cannot be copied by screengrab or video)

Key worker certificate verification anywhere - _Authenticating the certificate remotly using the secure QR app_

* Once a certificate has been issued, authorised users from NHS management and other key worker organisational management can remotely use the app's built in verification system.

* Allows authorised user to scan secure QR code, systems secure algorithm checks the validity of the code and returns a confirmed / denied response.

* This ensures fraudulent certificates cannot be issued and thus authorities and management can safely allow that person back to work

* Can work both on and offline to provide remote verification anywhere.**Test certificate mission control centre** - _Central management and reporting of testing and certificate issuance_

* The Hub NHS Commander dashboard provides a centralised overview of all registrations, test results, devices & certificates issued for national and regional insights and management

* Enables the auto export and import of data in SGSS format (Second Generation Surveillance system) to HR or EPR systems.

* Complying with the mandatory standard by Public Health England for data handling with the NHS.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
WINDRACERS LIMITED	Performance of UAV flights to Isles of Scilly to mainland Cornwall for NHS Logistics	£49,751	£49,751

The Windracers ULTRA UAV platform has been developed to move upto 100 kg of payload over 1,000 km, and can therefore support communities in the UK where existing NHS logistical links are challenging. Either due to islands separated from mainland transport infrastructure or remote locations due to topography.Existing transport links to the Isles of Scilly are constantly challenged by weather (high winds and fog / mists), variable demand and economic supply. With the addition of a UAV link, smaller urgent payloads can be economically and rapidly moved to and from the Isles, independent of existing transport modes. In particular there is a need to move NHS tests and samples off the Isles in a timely manner, and in particular, PPE and pharmaceuticals onto the Isles. This project will support the NHS and potentially save lives.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
EASYWEBSTORE LIMITED	Foodboxes Delivery	£46,970	£46,970

Orderly would like to make their Foodbox delivery technology solution available to all businesses. The technology and proposition allows delivery of foodboxes from businesses both large and small to be delivered directly to customers households, the vulnerable and the NHS.

Already in use with a major supermarket, the platform will be easy to sign-up to, quick to choose a courier, easy to add products and simple reconcile funds. With this, businesses small and large can begin to deliver food boxes.

There are multiple benefits to the project:

* It supports these businesses both small and large

* It stops customers having to leave the house to visit shops (adhering to social distancing and further supporting the vulnerable)

* With the NHS validation service, it allows businesses to prioritise NHS deliveries and deliver directly to hospitals for click and collect.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE PROPOSITION CIRCLE LIMITED	Virtualising Innovation Labs: Moving a leading innovation platform online to accelerate UK insurers' digital transformation through the use of Tech ventures.	£49,744	£49,744

UK insurers underwrite £252 billion of gross written premiums (GWP) or 6.5% of a global GWP total of nearly £4 trillion. Yet, as the Covid-19 pandemic emerged, only a few market players were able to provide responsive discounts, rebates or premium payment deferrals to customers. Indeed, many were unable to support customers, employees or trusted partners due to the complexity of legacy operations and ease the deployment of such fundamental changes as such disaster recovery plans were never considered.

This did not demonstrate a lack of will though, but rather, a lack of operational resilience underpinned by insufficient digital adoption.

Covid-19 puts a spotlight on these insurers and their issues. In the post-Covid world, insurers that cannot respond quickly or innovate continuously on digital platforms will struggle. Such insurers now face a narrower timetable for revamping outdated operations, processes and structures and future-proofing their businesses for future challenges. And they must do this in an environment where virtual working will have become the norm.

This project will establish a replicable framework to consistently deliver next-generation Virtual Innovation Labs to support them. Based on established methods and practices already developed for Insurance and a range of other industries, it will now make these otherwise 'high-touch' and location-dependent approaches available online. The solution will provide a platform, method and technological tools for evaluating emerging technologies transparently and deploying innovative solutions in weeks rather than months, short-cutting lengthy approval channels in favour of prototyping and even for transforming old business models longer term.

To start, we will engage the UK's leading insurers and a wide range of innovative startups in online, high-impact collaboration to build, test and refine this virtual approach to innovation. The work will see this relationship through to agreed plans and next steps to scale the model across the insurance sector to start with, whether they involve the integration of specific tools or broader partnership for more profound transformation.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ANDIGITAL LIMITED	Rapid Pivot	£49,267	£49,267

Covid-19 has had a devastating impact on small businesses and forced many to close their doors while lockdown is in force. This means that critical revenue streams - people coming through their doors - have stopped, and many lack the technical knowledge or digital expertise to pivot their business online and help retain these customers in other ways.

RapidPivot is a free platform to help small businesses find new ways to keep trading and make money through Covid-19 and beyond.

Our easy to use diagnostic tool will help businesses get to trade digitally using popular, proven software that's easy to maintain, low cost and requires no coding skills. We can help them navigate buying a domain, setting up an online payments solution or selling their products online.

They will then be able to:

- * Create an online channel to engage with their customers & to deliver straight to their homes
- * Inspire and enable small business owners to find new revenue streams and repurpose their entire business model
- * Reach new customers all over the UK & around the world

Small businesses are at the heart of our local communities and the foundation of the British Economy. The impact of the pandemic on them has been enormous, with many forced to close to protect public health over a temporary but yet undefined period.

While many have chosen to pause and wait for the new normal to emerge, others need to trade their way through and offer much-needed services direct to customers' homes.

In most cases, these are new, untested, operating models. There's also strong dependency on being able to connect with customers in their homes whilst shop premises are closed. In order to both connect and scale these new offerings many will require a rapid digital presence that suits their capability and budget.

RapidPivot is the hassle-free way for SMEs to transform their revenue streams.

There's no time to waste, Let's get cracking.

Let's help Small businesses fight this Covid related business downturn by building alternate revenue streams thus helping them prepare for a Digital Future



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
P & P MERCHANDISING LIMITED	Manufacture of Re-usable and optional Identification Garments	£44,586	£44,586

As a clothing manufacturer for the past 30 years based in the UK with embroidery facilities, we embarked in supplying clothing to the NHS with Embroidered, Personalised, re-usable theatre hats (The hospital were using disposables prior to this) with the name and occupation applied so when in theatre the individuals can now be denoted from each other.

using the ethos of replacing one-use disposable garments with fully reusable garments that can be industrially laundered, both cutting down on waste and saving money over the garments 2-3 year (on average) lifespan, we want to extend the products we offer into a range of currently sought after garments.

we are currently supplying Theatre Hats and Scrub Suits manufactured to order direct to Hospital Trusts optimising our Just in Time strength and are looking for the grant to be able to diversify our product range into re-usable and personalise able Gowns and Face masks to meet the immediate need with a safe and conforming garment that does not have a single use lifespan.

The Key objective for the project is that by the end of 2020 we are utilising a large proportion in the region of 35% of our business from other non-essential sectors and diverting the availability and production back into the NHS utilising the new re-usable product range we have at our disposal.

We feel that with the assistance of the grant we will be in a position to provide the NHS going forward with a reliable production base of reusable essential PPE Clothing, specialising in Just in Time Manufacturing to supply the most needed requirements at the correct times and have zero reliance on stock levels. our current manufacturing capacity is around 4000 units of clothing per week (relative to complexity) which can be directed to the correct areas with multiple products available as and when it is required.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ARBORG LIMITED	Rapid Job Creation for Social Care	£49,560	£49,560

Public description

OUTT is a new app for candidates and employers to provide a fast solution to the UK social care staffing crisis.

The Covid-19 pandemic has placed an increase demand on social care staffing, which already had an acknowledged 17% true vacancy rate in 2019\.

By identifying the blockers and removing associated barriers, we will provide solutions with a mixture of technology and people power.

We are developing a work app for social-care candidates and employers. It will allow candidates to accept work (via PAYE) directly with employers, when and where they choose. A solution that can complement existing work or standalone without the need for an employment agency.

The app allows social care candidates to register and become compliant for work in the fastest route possible, using innovative training solutions and a high-tech compliance process already adopted by the finance industry.

Once approved and available for work, candidates add their availability to access shifts.

Social care establishments can search, directly source and engage candidates for urgent shifts. Once complete the candidate is paid under a fully approved PAYE scheme and receives holiday pay and other mandatory features. If the social care establishment wishes and the candidate agrees, then they are able to offer them permanent employment at the click of a button.

The benefits include:

- 1. Faster hiring process, meaning candidates are back to work quicker
- 2. Live pool of trained staff for social care establishments
- 3. Temporary and permanent opportunities to suit each party's needs
- 4. Best use of the latest technology and people power
- 5. Address the existing urgent staffing demand, which has been exacerbated by coronavirus



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
RD GRAPHENE LIMITED	Amplification-free Viral RNA Detection using 3D Graphene Foam	£49,866	£49,866

RD graphene Ltd (RD) has developed a completely novel process to manufacture purest graphene in a sponge-like 3D matrix (3DG). This PCT patent pending process will enable the application to everyday products at an affordable price.

This project will demonstrate in the shortest of possible timeframes world's first amplification-free detection of viral RNA on patented 3DG. This will pave the way to commercialisation of a plethora of diagnostic tests invarious markets from human diagnostics to food and environmental testing.

3DG is the most desirable form of graphene and RD is the only company in the world currently having a design-for-manufacture process that can be scaled to high volume manufacture from reel to reel with cycle times in seconds.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ARCUS GLOBAL LIMITED	Automated voice AI bot supporting engagement of vulnerable citizens in Digital Health, data collection and emergency response.	£49,939	£49,000

Our solution will aim to completely automate the process of gathering data from people (or polling people) using AI enabled voice technology similar to what powers Amazon Echo or other virtual assistants. By connecting these services to telephony interfaces, we are able to proactively call multiple (hundreds or thousands) of numbers at speed, and multiple times, potentially reducing data gathering timescales from days and weeks to minutes or hours. The bot's powerful natural language processing capability will turn gathered data into a structured dataset that can quickly be exported and analysed by an organisation to identify a swift course of action. The data could potentially be directly linked to an application or consumed by a larger database.

Objectives:

Mass communicate by phone with members of the public, provide a message, ask multiple questions and receive a set of responses recorded in an easily consumable way. Use at times of crisis to:

- * Contact a set of customers/ organisations at speed.
- * Configurable (Add your questions via a user interface)
- * Easy to start (Simple and fast approach to uploading regular sets of target phone numbers)
- * Easy to access results (Simply output of calls status and question responses)
- * Localised (UK voice)
- * On-demand (available when you need it as a cloud based service)
- * Cost effective (priced per use based on volume)
- * Secure (data held in the UK)
- * Support (Supported by UK organisation, with Security Cleared personnel)
- * Options
- 1. Configurable SMS text of informational links to be sent after a call
- 2. Forward a call to a Voicemail to capture more details information

3. Conjoin the solution with a cloud based soft-phone to forward priority calls directly to an agent (for example 999) or forward calls into an organisation's traditional call centre queue.

In normal times one may use a call centre or a web based self service solution to do a similar task or as seen in the COVID-19 response recruit a bank of volunteers. However the recent pandemic rendered many call centres inoperable as organisations were forced to exit premises. Volunteer organisations have stepped into the breach but were faced with similar logistical challenges and struggled to generate the sheer volume of calls needed in tight time constraints making progress slow. Many of the vulnerable and elderly population do not have access to the internet or are beyond the "Digital Divide" and many don't believe they are vulnerable until it's too late.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
INNOV8 LIMITED	X-Deliver	£50,000	£50,000

X-Deliver enables customers to experience traditional 'high-street shopping' online, safely, easily, at their own convenience and with streamlined payment and delivery options.

X-Deliver is an app that provides a shared platform for independent retailers in the UK (_who have not usually needed online/delivery services up until this pandemic_) like farm shops, pharmacies, bakeries, book shops, fishmongers, local specialty shops and takeaways, to sell their products to customers online. The app also connects retailers to anyone with transportation means (car, bicycle, on foot, scooter, motor bike etc.) within close proximity to the shops (to cut down carbon emissions) who would like to earn some extra money, to deliver goods to people who need them in their local communities.

X-Deliver will provide small businesses with an easy-to-use platform that enables them to display and sell their goods online. Instead of each business developing and marketing their own website for online sales, we will provide a single location for them to maximise visibility to customers, and lower the barrier to online sales/payments for small businesses who may not already have that facility. Currently online retail makes up 26% of total sales, this is expected to double or triple by 2030\.

X-Deliver is unique compared to existing platforms as customers use a single online shopping basket across all the small shops they wish to purchase from, making a single payment that is dis-aggregated and distributed to retailers, and receive one aggregated delivery for all items, reducing the carbon footprint.

The need for online, on-time and on-demand personal delivery has been amplified due to the Covid-19 pandemic. X-Deliver provides sustainable on-demand delivery services to independent retail shops and provides extra income/work to people impacted by the pandemic.

The community aspect of X-Deliver provides vital added value when compared to existing delivery services with useful digital communication and social tools that can support local commercial and social activities and promote the associated benefits to our mental health and well being.

It is vital that we support small retail businesses as they are the lifeblood of the retail sector and if they fail, gaping holes will be left in our high streets. To that end, X-Deliver not only helps our independent retailers stay in business, it also provides accessible paid work to the local community and provides vulnerable people with on-going support for personal, on-demand, in-home delivery of goods.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
WARDWATCH LIMITED	Improving access and Capacity of clinical education	£48,585	£48,585

WardWatch is an App that connects medical students and staff with learning opportunities round the hospital. Teachers can create learning events, students are notified in real time and book in. Both teachers and students have a record of learning and give instant feedback. That information informs the delivery of education with insight and evidence-based data.

Key issues

• Communication: Clinical services are under pressure, which makes balancing service provision and education increasingly challenging. The increased patient numbers present more learning opportunities, but the learning environment is challenging for all at present.

• Capacity: Learning is conducted on the wards more than ever before, it's not only doctors looking for teaching resources, but nurses, physician associates and advanced nurse practitioners. Opportunities are numerous but ensuring all students get the experience they need requires communication and information to manage it.

• Covid-19: This has significantly changed the way learning can be delivered in hospitals. Providing an on-line module to deliver live streamed sessions in addition to bed-side teaching will allow teaching to continue without compromising student and staff safety.

A Solution

WardWatch alerts students to learning opportunities in real time, allowing them to take ownership, to book and manage learning on their schedule. This may include being made aware of learning in departments they ordinarily wouldn't go to, or even a notification of something happening on the next ward. Giving and receiving instant feedback not only rewards the students and trainees, but also serves as an indicator of teaching delivery and quality. This information highlights demand, areas for improvement and excellence which allows for evidence-based support in learning delivery.

WardWatch has already been used in several successful trials in a large teaching hospital and has a road map for development at scale. We are committed to helping students and staff navigate these extraordinary times supporting teams within hospitals and helping build capacity to capture the learning available on every ward and clinic.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
AZURE TECHNOLOGY LIMITED	Student Confidence and Subject Mastery	£46,000	£46,000

When it comes to exams, confidence is key. A UCL study of over 16,000 secondary students found that those with the greatest confidence in their own ability were 18% more likely to achieve 5 good GCSE passes and on average gained 41 points more in their GCSEs compared to similar ability but less confident students. That is the equivalent of achieving 6 C grades rather than six D grades.

So, for something that is of such critical importance to the outcomes of student it is surprising that we do not measure a student's own confidence in their knowledge and understanding.

The recent Covid-19 outbreak and subsequent lockdown has made this an even bigger issue with students across the UK missing out on significant work, in particular students in years 10 and 12 who will be sitting exams next year but have had no face to face contact with teachers for what could be more than a third of a school year.

Our confidence app addresses this shortcoming. Students will now be able to score themselves against every subject and highlight areas of the curriculum where they are not yet confident. This will give teachers a huge insight into where they need to focus extra lessons and support for students so that they can help to develop confidence and enable students to achieve the results that reflect their ability.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
LOCALGIVING LTD	Digital Skills Charity Match	£49,144	£49,144

Localgiving launches new remote volunteering skills matching app. The tool uses natural language processing to link volunteers to projects where they can usefully contribute their skills remotely in areas of the UK that are sentimental to them and their family.

Charities and groups providing frontline services to local communities will be able to post short and long-term volunteer opportunities, from logo redesigns to the delivery of a crowdfunding campaign.

Volunteers will no longer be restricted by the location of volunteering opportunities and the project will connect volunteers to grassroots charities providing vital services to local communities across the whole of the UK.

The volunteering platform will provide automatic matching of volunteering opportunities to a volunteers skills, availability and interests - significantly reducing the time it takes to help a local charity.

The digitalisation of volunteering will enable charities that are facing significant increases in demand for their services to reallocate local resources to meet this need.

Our vision is a product that will enable a freelancer in Brighton to come to the platform and instantly be able to re-design logos for two charities, in Rhyl and Newcastle, during the evening. If successful, the freelancer may be able to develop relationships that expand into paid work that they feature on their portfolio for other prospective clients. The product will also enable a graduate marketeer in Truro to sign-up to deliver a new social media campaign for a foodbank in Norfolk to support the launch of a crowdfunding campaign and be onboarded and volunteering within a week. This will enable a volunteer at the charity to be redeployed to frontline services, support the charity to raise extra funds during their campaign and for the graduate to add the experience to their CV.

Localgiving is a business which currently provides digital services and fundraising solutions to 3,000+ local charities and community groups, with partners such as the National Lottery Community Fund and People's Postcode Lottery. The funding for this project has enabled Localgiving to launch a new product led by the large demand facing organisations providing frontline services to vulnerable people through the Covid19 situation and beyond.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
UNMANNED SYSTEMS LIMITED	Autonomous Drone Disinfection for COVID-19	£48,000	£48,000

Unmanned Life deploys autonomous missions for various industry 4.0 use cases, through its hardware-agnostic SaaS platform for Autonomy-as-a-Service, that can control a swarm of drones or a fleet of mixed autonomous robots such as drones and ground vehicles, to complete complex autonomous tasks collaboratively. The Unmanned Life platform is flexible, scalable and can be deployed for multiple use cases across various sectors such as public safety, Industry 4.0 and supply chain and logistics. Unmanned Life has already deployed this platform with major Fortune 500 partners and customers worldwide in the postal and logistics sector. We wish to translate this know-how into the current emergency state of tackling the COVID-19 pandemic. Public spaces and hospitals are hotspots for contracting Covid-19 resulting in a quicker contraction of the virus. As the virus can survive from several hours up to several days on specific surfaces based on the report by WHO, 8th Apr 2020, it has become important to disinfect these areas preventing the virus from spreading. Currently all disinfection operations are carried out manually requiring human labour. The disinfection process consists of complex steps dangerous to workers, lengthy and time-consuming, and lacks accuracy as well as scalability for larger public indoor and outdoor areas. Unmanned Life (UML) is proposing the deployment of autonomous disinfection swarm of drones controlled by its highly interoperable Autonomy-as-a-Service software platform able to disinfect public areas precisely and in a short time. Autonomous drones equipped with spraying systems remotely controlled from a control centre work as unified swarms indoors and outdoors disinfecting places like buildings, benches and other public community spaces while indoor drones installed with UVC lights disinfect indoor surfaces of hospitals on a continuous basis. Depending on the type of drone, each drone carries a different payload of equipment needed for the disinfection. Real-time monitoring from the control centre is enabled by the video camera and streaming system installed on the drones. Colour zone-mapping from the cameras indicates the historical data of the treated areas. Our software platform integrates with existing information systems providing critical insights to both the control centre and citizens. This new solution will establish the UK Emergency Response sector, as a model for worldwide adoption.



Competition Code: 2005_CRD_CO_COVID19_R2

Total available funding is £40,000,000 rounds 1 and 2. £7,000,000 for this round

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
KORU KIDS LTD	'Virtual nannies' to allow parents to work from home successfully	£49,738	£49,737

Problem: Covid-19 has closed childcare settings, while parents work from home. As millions have discovered, it is impossible to work and do childcare simultaneously. The result: terrible stress for parents and children PLUS worsening UK productivity. Productivity matters a lot: the Office of Budgetary Responsibility is predicting a GDP fall of over 30% in 3-month lockdown scenario. We must urgently solve this problem, and allow parents to focus on their work.

Existing solutions being used by some parents are inadequate:

-Tutoring is expensive and only for older children

-Apps and 'broadcasts' for children require parental supervision

-TV is undesirable for child development, and parents don't want it

-In person nannies are expensive

Solution: Koru Kids will deliver a tech platform and series of interactive programmes for children, incorporating dance, song, movement, acting, and stories, plus a methodology to train childcarers to deliver the programmes at scale. We will deliver childcare that is (a) online (b) personalised and interactive (not a 'broadcast') (c) one-to-many (d) appropriately varied to meet needs of children from age 4 to 10 and (e) able to be delivered by an 'average nanny'. We have the multidisciplinary inhouse team to design the programme, build the software (using existing platform), and deliver operationally.

Innovation: No platform or methodology like this currently exists anywhere in the world. There is risk of failure, if we cannot create successful programmes or a methodology to deliver at scale.

Value for Money: To deliver quickly and cheaply, the project builds on Koru Kids' existing expertise and technology, including Koru Kids child development principles (incorporating Montessori, Steiner, and RIE) and previous user research. Existing project team has expertise in childcare, teaching/training, UX design, software development.

Market size: UK market is £1.7bn, comprising 776,000 children aged 3-12 with professional working parents, each family consuming 15 hours per week @ average £3 per hour per child.

Benefits: Families get affordable childcare so parents can work. Children get better care than 'screens'. Employers and economy get more productivity. Goal is additional 20 hours focus per week, = 20-40% productivity increase for professional working parents. Main Project KPI = \# hours childcare delivered (target 30,000 by end Week 12)



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CC2I LIMITED	Digital Data Protection Impact Assessment - Digital DPIA	£47,586	£47,586

During this Covid-19 crisis period we have seen the need for the sharing of data at an unprecedented pace in order to provide organisations with the critical information they need to respond to the crisis. This has been with regard to health and population data to facilitate research and critical decision making. The responsible way to assess these data sharing requests is to undertake a DPIA. However, there is a lack of consistency between organisations, often leaving a DPIA as a blocker to moving at pace rather than an enabler of good/safe practice.

This project will develop the UK's first cross sector Digital DPIA platform which will guide the user through the completion of the assessment and make data sharing (both in 'normal conditions' as well as in a crisis situation) easier and more robust, providing assurance that risks have been assessed and recorded in a consistent, and controlled fashion. It will also enable responsible bodies to reuse good examples created by other public bodies on a similar topic - significantly shortening the time to complete a robust and appropriate DPIA.

As an example of inconsistency, during this phase we have seen a number of 'mini' DPIA templates being created in response to the crisis to enable the DPIA process to be undertaken in a more responsive manner. Results have been sketchy and corners will have been cut in the pursuit of expediency. A digital solution that can be responsive to a crisis situation that provides a unified approach to this would ensure that users were working consistently and in a controlled fashion. Given the nature of the data that is being shared, this is of paramount importance.

The DHSC issued a Notice under Regulation 3(4) of the Health Service Control of Patient Information Regulations 2002 which requires certain organisations to process confidential patient information in the manner detailed in the notice for purposes set out in Regulation 3(1) of COPI. As part of this notice it states that 'A record should be kept of all data processed under this Notice.' The way to do this is by undertaking a DPIA.

This project brings together Greater Manchester Combined Authority (GMCA) along with Norfolk CC, Uni of Nottingham, LOTI and supported by ICO, NHSX - all coordinated by CC2i and to deliver a platform that will transform this important aspect of work during the Covid-19 pandemic.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE LINK APP LIMITED	The Link App- Digital client onboarding	£49,759	£49,759

Law firms are critical to the continuation of the right of the citizens of the UK. Victims of domestic violence will need injunctive relief, parents separated from their children and employees desperately trying to interpret their employment rights, all need to instruct a lawyer to advise and represent them during this difficult time. However, the legal sector was one of the least prepared for remote working and social distancing as it relies heavily on paperwork, face-to-face meetings and in-person court presences, all of which are currently limited or unavailable to firms or their clients.

This project will provide a single, secure and integrated platform for onboarding clients, managing case-loads and enabling legal firms to continue their vital work in the UK during and after the COVID-19 pandemic. Alongside this, the platform will offer resilience for organisations in the event of a second wave of the pandemic or future disruptive events.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE NATIVE ANTIGEN COMPANY LIMITED	Scale up production of Covid 19 spike proteins for diagnostic tests	£48,799	£48,799

Serology tests detect antibodies circulating in the blood to determine whether a person has been exposed to an infectious disease (e.g. COVID-19). To make these tests we need fragments of the infectious agents, which provide the antigens that antibodies recognise. For many years the Native Antigen Company has been developing and manufacturing such raw materials for tests against many different infectious diseases (e.g. Zika virus, Dengue, Ebola ...). We have identified suitable fragments of the COVID-19 virus and they have been validated in diagnostic test kits. But now we must manufacture huge quantities in a short time. This has never been done before. This project will help us to develop the methods essential for the manufacturing process to be scaled up. As soon as we have this critical information we will move into large scale production. We will also learn how to respond more quickly in future to outbreaks of infectious disease.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PEOPLE MATTER TECHNOLOGY LTD	Building Resilience in a Digital Remote Working World	£49,703	£49,703

Since the pandemic, there has been a stark increase in reports of loneliness, depression and anxiety. This is predicted to have lasting impact to society to our ways of working, lifestyles and mental health. With the right tools, this impact can be better supported and adverse impact can be reduced.

People Matter exist to create a more caring world. We create intelligent wellness tools that help people and organisations to take charge of mental wellbeing, to spot burnout risk and build personal resilience. In testing times, we need the right tools and systems that empower us and help us feel in control. This project aims to provide people with valuable data and insights on how your digital world - such as your online working habits, communication patterns and lifestyle - may be impacting mental well-being and from this provide personalised well-being tips. This means giving people the right insight and the right advice, at the right time. No product does this today. By making well-being tools intelligent, we can be more effective at understanding your needs to support you no matter where you are or what your personal circumstances may be.

In partnership with Microsoft, this 3 month project will focus on integrating directly with Microsoft O365 and Teams data. This meta-data includes digital communication, social and working behaviours to further develop a well-being model and risk score. Specifically, this project will aim to validate algorithms that helps you spot risks to burnout and poor mental well-being and builds on 18 months of research and development conducted already with 3,500 people. From this, we will develop an engaging user interface via an app and weekly email reports that provide users with these insights. Reports are based on a psychological model and will be designed to provide both insight and specific psychological advice and nudges to you via an app - acting as a wellness companion to build healthier behaviours and resilience. To create a more caring world, organisations also need better tools to understand the impact of remote working to employees and to understand the health of the culture. This project includes the development of a predictive analytics platform that will provide macro-insights on well-being culture and risks. Individuals remain private and are fully in control of their data - only with consent from users would employers be able to see high-level trends.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ONKOHEALTH LTD	A digital health optimisation solution for people affected by cancer	£48,795	£48,795

While the NHS is focussed on dealing with COVID-19, there is a secondary crisis evolving in cancer. Diagnosis is being delayed and in those recently diagnosed, cancer treatments are being modified or deferred and people with cancer are isolating with little access to support. It is estimated that the pandemic is going to result in a significant impact on national cancer outcomes over the next 2-3 years.

This project enables the delivery of a digital health innovation to NHS cancer patients in their own home, during the pandemic and beyond, to improve their health and treatment outcomes including quality of life. Cancer patients will receive health coaching and support using an app integrated with weekly video-consultations and wearable technology.

The programme uses a hybrid approach; it leverages technology to make clinical interactions with patients more efficient, effective and responsive.

The app consists of 4 key features:

1.Patient's physical, psychological, nutritional and lifestyle behaviours are assessed via The ONKO Cancer Health Checker. This 30-point questionnaire provides an overview of people's health status. It enables the coaching programme to be personalised and risk stratified.

2. The app is integrated with wearable technology and, is sent along with a starter health kit, to people's homes. This provides real-time data feedback to the patient and clinical team on activity levels and physiological measures.

3.Patients self-schedule a remote consultation and initial health assessment with a cancer healthcare professional.

4.Health coaching programmes using behaviour change science are developed in collaboration with the patient and modified weekly via video-consultation. They are tailored to the individual and include exercise workouts and strategies to address nutritional, psychological and lifestyle needs. Programmes last between 4-12 weeks depending on the cancer pathway. Through the direct messaging feature, patients have access to a professional coach to guide and support them throughout the programme. Online peer communities will be developed for NHS patients to provide extra support and motivation.

ONKO's founders and clinical team members are all cancer professionals. Through grant funding they developed and tested a programme of health improvement in the NHS which led to significant health improvements in cancer patients and resulted in fewer complications, better quality of life and costs savings.

The project will enable the ONKO digital solution to be implemented and tested within the NHS to inform strategies for scaling up during the COVID crisis and beyond.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DOCTORANA SOLUTIONS LIMITED	Supporting the capacity for self regulation and the development of emotional intelligence in children, young people and their families	£48,955	£48,955

We are offering an online educational intervention called **Smart Brain Wise Heart** (2017) to teach self-regulation, stress management and emotional wellbeing. It has two streams to target children of different ages, their families, and our communities to prevent the onset of stress, anxiety and trauma triggered by the Corona pandemic.

The key ideas relate to the self-regulation of emotional / physiological arousal using activities that are fun, engaging and easy to follow. A psychologist supports the child and family to engage with the learning material and put it into practice together: review questions, key vocabulary, activity worksheets.

Practitioners use active participation to learn skills, movement activities and games to consolidate the learning and put it into practice. Each session ends with a learning based scenarios video that reinforces the key ideas from the unit. Action assignments are given as "homework" in between sessions to consolidate what participants have learnt and demonstrate to the practitioner that they have successfully achieved the goals of the previous session

The success of such programmes has already been extensively researched and developed. Bothe et al. (2014) studied the effectiveness of a school- based stress management and self- regulation programme similar to ours. The study showed a significant decrease in anxiety immediately after the completion of the programme and one year follow up in comparison with the control primary school children assessed.

We wish to offer this programme to people in isolation, those who may not have access to mental health services or those who are not considered a risk priority at the time. We aim to teach emotional intelligence through emotional regulation to reduce the development of trauma when individuals return to work and school. Criswell, Sherman and Krippner (2018) implemented a similar bio-psycho-social approach to reduce Post Traumatic Stress Disorder (PTSD) symptoms in adults by teaching skills for future resilience in the face of stressors. Of the 26 adults that completed the programme only one returned to a PTSD diagnosis at a three month follow up.

It is now paramount to engage and support our communities with a programme that is accessible. along neurofeedback, cognitive behaviour therapy and family therapy this programme teaches a core competency for life, further ensuring our "wrap around the child" approach.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CENTRE FOR SUSTAINABILITY AND DEVELOPMENT	Face mask inactivating viruses and bacteria	£49,998	£49,998

The project addresses the need for reliable, re-usable, high-grade PPE for HCW and people in emergency rooms. The specific aim is to satisfy the public need exacerbated by the COVID19 pandemic. In the U.K., one in four doctors is off work because they are either sick or in self-isolation, according to the Royal College of Physicians. In Italy, most infections occurred in hospital emergency rooms due to the volume & traffic of people without masks. Overall, 10% of those infected with COVID19, were HCWs. This increases the strain on the NHS and other National Health organisations, especially during a pandemic.

The specific innovation is a face mask for protection against viruses and bacteria. The novelty of the mask is created by a combination of know-how from a number of different medical fields. The mask does not simply filter out harmful pathogens, but also inactivates them, rendering viruses incapable of pathogenesis. The approach is unique in the way it combines the best aspects of the two main types of PPE:

a) Common filter based face masks -- light and portable, value for money, offers reusable models

b) SCBA based PPE (for example hazmat suit) -- offers the highest grade of personal protection, suitable for work in high-risk environments

The current invention is light and portable while also offering enhanced protection like SCBA-based PPE. The invention solves the drawbacks of filter-based masks (ssRNA viruses are 6-10X smaller than the filters in the highest grade surgical masks, like N95) and of SCBA equipment, which is single-use and exceptionally expensive.

Our target groups include A&E staff, Advanced Paramedic and Emergency Medical Technicians, GPs during an epidemic, all other HCWs, visitors to A&E rooms.

Our Primary market will be A&E staff and GPs in the UK and the US. We use the fabless business model allowing us to benefit from lower capital costs while concentrating their research and development resources on the end market. Our team members have experience in implementing Horizon 2020 projects and offer a unique combination of skills in business and strategy, marketing & sales, engineering, and product design, and serial entrepreneurship.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
FUTURE FOUNDATIONS TRAINING LTD.	Global Social Leaders Summer Programme from home	£47,533	£47,533

Future Foundations is an independent award-winning organisation which believes in the power of young people to create a more sustainable and brighter future. We design and deliver pioneering training programmes and experiences for young people between the ages of 7 and 24 globally. Our mission is to inspire young people to achieve their full potential. Our vision is a society where all organisations are led by socially conscious people, with every young person making the transition into adulthood with the foundations they need for their future.

Our innovative Global Social Leaders (GSL) programme, launched in 2013, in partnership with the Wellington Leadership and Coaching Institute, empowers young people to co-design innovative social action projects benefiting their families, communities and charitable organisations further afield.

GSL was recognised by the Royal Society of the Arts as an innovative programme with a Catalyst award to broaden our reach and impact in 2016. We have since inspired and supported 5000 young people to deliver over 1000 projects in 100 countries.

This funding would enable us to convert our programme to focus on home-based online/offline delivery, increasing its accessibility to young people on a freeof-charge basis, particularly targeting those in more deprived communities who will lack meaningful/developmental activities over the summer holidays. Our summer programmes have traditionally been in-person/face-to-face.

This summer, we want to deliver our GSL summer programme in a way that young people can participate fully from home in their own time. We will engage with our school networks to promote our free, high-impact summer programme with both online and offline options. Participants will have options to participate for 1-4 weeks, depending on personal preferences. Our project will benefit 2,450 participants from 35 schools through leadership and 21st Century workplace skills development and will replace cancelled mainstream summer activities.

Each participant will undergo a personal journey, they will connect with like-minded peers from across the UK and the world and will be challenged to consider what actions they can take to make a difference. Participants will choose if they want to focus on their family, local community, fundraising initiatives for charities or running a campaign to raise awareness of an issue. They will complete 350 projects benefiting communities both in the UK and globally, generating 73,500 social action hours during the grant period. They will be challenged to present their learning and impact in September, aiding a positive transition to school.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
GOLDEN DATA LIMITED	A Low Cost Remote Body Temperature Monitoring and Symptom Diagnosis Solution	£49,737	£49,737

The low-cost remote body temperature monitoring and symptom diagnosis solution helps self-isolated people to monitor, record, and get remote feedback on their symptoms. It fills the gap in the data analysis of the COVID-19 pandemic and provides visualised statistics such as regional suspected and isolated patient numbers and their status. It will help to reduce public panic feelings and decrease cross-infection probability. It also helps to alleviate the shortage of healthcare staff by improving their working efficiency and protecting them from unnecessary contact with patients.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CARD MEDIC LIMITED	CARDMEDIC	£49,953	£49,953

CARDMEDIC is a free innovative digital communication technology designed for frontline healthcare staff to communicate with unwell and critically ill COVID-19 patients through the barrier created by PPE (Personal Protective Equipment; face masks/visors/hoods).

Available as a website and app, it comprises an A-Z list of flashcards encompassing common topics healthcare staff talk to patients about including medical procedures and investigations.

CARDMEDIC is also a convenient upskilling tool for returning/re-deployed healthcare staff working outside their usual clinical practice arena, and a communication training tool for university healthcare students.

The flashcards are simple, flexible and succinct, using basic language to keep patients informed and involved in their care. Translated into 10 different languages currently, with a "read-aloud" option for unwell/partially-sighted/blind/illiterate patients.

TESTIMONIALS

"_On behalf of the whole country, I want to thank you for the wonderful contribution you have made to our NHS and to assisting health workers caring for those with Coronavirus right across the world. It will surely continue to assist healthcare around the world long after we have defeated this pandemic._"- Prime Minister Boris Johnson

"_This is a truly innovative product that could change the future of the healthcare industry and be widely applied across the world long after the pandemic._"-International Trade Secretary Liz Truss

"_This is very useful. We have incorporated it into our local how to aid communication guidance. Brilliant._"-Dr Pauline Wilson;NHS Shetland

"_Brilliant and very timely initiative. Delighted to be collaborating. Hugely important for patient safety. Promoting it through Patient Safety Learning and WHO network._"-Helen Hughes-Chief Executive; Patient Safety Learning

"_Frontline NHS innovation at its best._"-Dr Mary Darking-Director of Digital Media Cultures Research;University of Brighton

"_So many use cases for this!_"-Nuala Foley-Training Management/Business Consultancy;KSS AHSN

"_Clear messages. Brilliant communication tool for use with patients when staff in full PPE._"-Professor Donal O'Donohue-Registrar of Royal College of Physicians;Consultant Renal Physician

"_Amazing resource, helping frontline healthcare professionals in PPE communicate with scared and critically ill COVID19 patients._"-Dr Sara Kayat-NHS GP/TV Doctor

"_A brilliant and needed concept. Masks prevent those who rely on non-verbal communication including deaf from getting meaning of messages. Love the read-aloud option_."-Fiona Collins;Speech and Language Therapist

"_Very intuitive. Stunning, simple program._"-Dr Gordon Caldwell;Scotland

MEDIA:

* _Media-s_ignificant inbound interest/coverage including (but not limited to)-BBC TV/News/Radio, The Guardian, Department for International Trade, Cabinet Office, Royal College of Anaesthetists

* _Articles_-Cochrane Database, Patient Safety Learning, KSS AHSN Newsletter, BOB.Health, Weshare.Healthcare, Real Talk Training

* _Webinars_-Patient Safety Movement Foundation-(USA), International Society for Quality in Healthcare-(UK)



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
SWAGGA INTERACTIVE LIMITED	Project EPEP (Escalator Pathogen Eliminator Project)	£49,105	£49,105

Every day we come into contact with millions of microbes including harmful bacteria, germs, viruses and pathogens which lead to the spread of infectious diseases.

Escalator and walkway handrails contain millions of germs, bacteria and viruses which lead to the spread of infectious diseases.

In the current Covid-19 world the risks of virus transmission remains needlessly high due to the lack of a practical, persistent and non-toxic solution to address this growing health risk.

We created PürHealth to focus on preventing the spread of active pathogens by identifying solutions that render the cells inactive, WITHOUT the use of harsh or toxic chemicals, using UV light.

Our innovative concept for an Escalator & Walkway Handrail UV Disinfection Unit easily attaches to any escalator or walkway handrail and immediately starts to eliminate over 98% of the bacteria and viruses that lead to the spread of infectious diseases. It is self powered and safe.

The science

UV radiation is present in sunlight, and contributes about 10% of the total light output of the Sun. There are three different types of UV rays; A, B and C. While they are similar, each type of ray has a different wavelength and can penetrate surfaces to a certain extent.

UV-C light has a short wavelength of 100-280 nm and is germicidal. It deactivates the DNA of bacteria, viruses and other pathogens and thus destroys their ability to multiply and cause disease.

UV-C light is weak at the Earth's surface as the ozone layer of the atmosphere blocks it. The absorption length of UVC radiation in human skin is extremely short so that almost no UVC radiation can reach the living cells in the skin; all the absorption occurs in the dead cell layers.

Our innovations ensure that the UV light is safe and effective for use in public places.

In simple terms, when bacteria or another type of microbe is directly exposed to UV-C light, the DNA (its fundamental building block) of the cell is damaged, preventing it from replicating.

If a cell cannot reproduce, then the cell cannot cause infection. **UV-C can even neutralize 'superbugs' that have developed a resistance to antibiotics and has been proven to kill the SARS family of viruses of which the current pandemic is related.**



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BUTLR LTD	Butlr Ordering Platform	£43,664	£26,000

Butlr uses a flexible app ecosystem, together with the incredible local cuisine available near users, to provide an enhanced dining experience. It allows users to order food and drinks in every restaurant, bar and pub on their phone without having to flag down a waiter or stand in a queue.

The hospitality industry is using Butlr to adhere to social distancing rules, giving customers confidence to visit again without running the risk of infection. The app allows:

- * Waiter free service
- * Removal of queues at bars and pubs
- * Ordering without cash, card and physical menus to limit infection
- * Contact tracing to quickly find outbreaks in venues and alert others who have come into contact.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
QIOT LIMITED	Connected Smart Inhaler & Privacy Preserving Software	£49,952	£49,951

This innovation project aims to address an urgent need in the light of Covid-19 to identify a need amongst people with asthma/COPD for immediate intervention by physicians.

Our project will supply a privacy preserving connected inhaler to asthma/COPD patients that will give physicians evidence of erratic usage of inhalers that may indicate medical intervention is required. This can be identified real time via our software platform which is designed to detect inhaler usage that is not in line with prescription, therefore creating an alert for local NHS intervention.

It is important to note that this is not a new medical device: if our technology that measures consumption on the inhaler were to fail, the inhaler would still work as a normal functioning inhaler.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
SCOPESUITE LTD	Scopesuite - Wellbeing	£48,624	£48,625

Data Driven Well-being Support for Employees

Scopesuite provide an employee management platform to organisations of all sizes.

The platform specialises in supporting early career programs and in particular young people who are new to the workforce.

Scopesuite helps Programme Managers to gauge employee experience and to provide support to those who need it quickly.

Part of the platform that allows us to do this is our automated employee engagement surveys. These are tailored to each business with the data displayed on customised dashboards that speak the language of each organisation.

This project will take our fundamental feedback tool, input from experts in behavioural science and neuroscience, then combine that with new functionality that will specify support resources at an individual level. This all based on data backed evidence.

Everyone is different and currently the types of 'surveys' that are used to evaluate emotions and well-being are one size fits all solutions. The key to this project is the technologies ability to suggest supporting solutions based on individual responses. This will then produce a greater level of accuracy with regards to helping the core and underlying issues.

Using data to automate well-being resource suggestions will be a more accurate fit than the typical one-size-fits-all solutions seen in current employee well-being initiatives.

Mental health in the workplace has been given increasing attention over the last decade. Support, technologies and knowledge in this space is still in its infancy, though the demand for support tools and platform is increasing. This is further amplified by the current Covid-19 pandemic.

Young people in particular are used to instant and immediate feedback. Anxieties and pressures of life seem to be more abundant than in previous generations. Suicide rates and those in need of immediate mental health support are growing. This is a significant challenge that society and the business world need to address. Employers are showing an appetite to provide support when they can.

Tools that can provide better accuracy in the challenges they face, as well as help direct organisations to provide effective support, will undoubtedly have a positive effect on society and the future of UK business.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PAZZBY MOBILE LTD	TPEye - remote visual telepresence for tourism in lockdown	£42,052	£42,052

The TPEye projects aims to deliver a audio/visual telepresence for use in tourism.

Addressing the issue of obstacles to physical travel as a result of Corvid19 and similar constraints due to poor health and age in general which now make conventional tourism difficult or unattractive.

Telepresence is defined as:

the use of virtual reality technology for apparent participation in distant events.

Whilst common in areas such as defence, space exploration and hazardous environments it has not yet been effectively deployed in a consumer context.

TPEye takes advantage of the developing high bandwidth data networks, such as 5G, the low cost of camera and audio platforms and associated local processing power to deliver an audio/video presence at remote tourism locations in real time.

The remote camera platform will be supported by a local guide. The real time link will permit users to request a focus on areas or items of interest. Image processing will facilitate provision of a view linked to the user desire point of attention rather than that of the guide. The user will thereby have a degree of freedom to explore the target destination that would not otherwise be possible in conventional video programming or video linked or recorded guided tours.



Competition Code: 2005_CRD_CO_COVID19_R2

Total available funding is £40,000,000 rounds 1 and 2. £7,000,000 for this round

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
INTENSE IT LIMITED	AI Enabled Decision Intelligence for Enterprises to Manage the Risks of COVID-19 in the Workplace	£49,814	£49,814

The risks to society from the global COVID-19 pandemic are only now being understood. The virus kills approximately 1% of infected individuals creating a major risk for any organisation with a public presence and companies reliant on large numbers of staff. This risk will be most acute as large numbers of the population return to work but will be a recurring risk within the workplace, sporting events, retail activities, etc.

Business leaders need the tools to make ethical, compassionate and evidence-based decisions that could affect the lives of their customers and staff. However, making these decisions requires analysing massive amounts of data that is changing within hours and minutes. This is where AI can provide leaders with real-time intelligence, simulation and support collaborative decision making.

This ambitious and highly innovative project will combine curated, publicly available COVID-19 data, sector-specific models for industries and data supplied by individual enterprises, using a pioneering cloud-based AI platform, to build forward-looking models for businesses. Business Leaders will be able to run a wide range of scenarios in minutes and simulate the outcomes of their options to then manage the risk of COVID-19 transmission within their organisation.

The principals of Intense IT have been running large- scale technology programmes across the globe and most recently, focused agile sprints, applying innovate AI solutions to large-scale business problems. Quantellia's pioneering cloud-based AI has been used across the globe to drive novel Decision Intelligence applications. The project team is also supplemented by advisors, Nelus AI, and so we have direct access to clinical epidemiologist experience to validate the medical efficacy of the assertions in the models.

This combination of world class expertise and AI-focused delivery now makes this innovation achievable.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BROOK YOUNG PEOPLE	Brook Learn Live	£49,871	£49,871

Brook has been at the forefront of providing wellbeing and sexual health support for young people since 1964\. We are the only national organisation to provide both clinical and educational services that address young people's immediate needs and that build an understanding of the importance of positive and healthy relationships. We deliver a blended clinical, educational and wellbeing offer that helps young people to be happy, healthy and safe from harm. Each year, we reach 120,000 young people directly through our work in schools, 500,000+ via our website, train over 6,000 professionals and reach a further 4,000 through our freely available online Brook learn platform.

We are strategically committed to reducing inequality and championing the rights of young people to receive a world-class sex, relationship and wellbeing curriculum and preparing teachers to deliver that across the school strata.

In response to COVID-19, Brook wants to transform the way Relationship and Sex Education (RSE) training is delivered to professionals working in the education sector. The 2020 summer term was the time for schools to prepare for the mandatory introduction of RSE in schools from September 2020\. For most, COVID-19 has impacted on that preparedness, meaning that come September, many schools will not be able to deliver the high-quality RSE young people say they want and need.

COVID-19 presents an opportunity for us to transform the way we deliver professional training. We want to shift our services to digital so that we can continue in the short-term to build professional competences, to generate income through selling our products, and to reach more teachers than we would via face-to-face training methods.

We expect there will be cost-savings for schools too. Delivering a more flexible, digital training offer (one that keeps the best of face-to-face interactions) will reduce the need for additional spend on cover and travel, and more teaching staff can participate remotely. We want to enhance our training offer so that it is deeply rooted in the lived experiences of young people and that becomes an addendum to the face to face work we deliver, rather than distinct from it.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MACHINERY AUTOMATION LTD	Variable Topology Semi-Rigid Packaging (V-Top)	£49,825	£45,000

Variable Topology Semi-Rigid Packaging is a new and innovative packaging system using multi-material 3D printing technology that may be used in a production environment to create customisable packaging, on demand. The application of surface tessellation to shrinkable films using fused deposition modelling (3D Printing) will result in the film topology automatically changing during shrinkage to create food or drink packaging.

The benefits of such a process include a significant reduction in costs and resources employed in the manufacture, delivery and storage of pre-formed packaging products plus substantially reduced wastage associated with the packaging of seasonal or short shelf-life products (i.e. elimination of 'out-of-date packaging).

The concept is founded on water sensitive composites developed at MIT. The technology has been termed 4D printing as it incorporates the element of time. MIT's moisture sensitive material can be 'programmed' to fold and unfold in the presence of humidity. MIT have created 'multi-material prints with the capability to transform from one shape to another'. This technology uses heat sensitive materials rather than moisture sensitive materials.

The objective of the project is to establish that this innovation is technically and commercially viable and that it will address the issues associated with current packaging and processing systems.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BOOST INNOVATIONS LIMITED	Virtual Fittings- developing a new software using data algorithms and scanning technology to offer an accurate remote breast form fitting service to women in isolation following breast cancer treatment.	£46,601	£46,601

Boost Innovations Ltd is dedicated to supporting women after breast cancer treatment. Unfortunately, many women who have had mastectomy operations are in high risk categories and remain isolated due to the Covid 19 outbreak. Boost has already designed and created a new pioneering breast form to restore shape under clothing. However, breast form fitting services are usually commenced in person, for the purposes of accuracy. Online retail relies on the interpretation of size guides, and are often based on bra size. This is problematic, as many studies indicate that up to 80% of women wear the wrong sized bra. Working with tech entrepreneurs Braista, Boost's project will pioneer a new software solution that will support women to access accurate, reliable and supportive fitting services remotely. Allowing women in isolation to identify the correct product for them will support wellbeing by helping women to regain comfort and shape after surgery. Unnecessary online orders, returns or misinterpretation of size charts will be avoided, creating an empowering user experience that focuses on remote smartphone based participation.

Our unique measuring methodology will combine 3D scanning, modelling and measurement packs that engage women in providing accurate data. Using these data sets, algorithms will be developed to underpin the software, providing an accurate service that identifies a suitable breast form product. Women who have had fitting appointments cancelled or who have felt unable to navigate the options of traditional online retailers will be empowered to receive remote support that utilises a unique blend of technologies to ensure that they can access the right breast form products for them. this innovation will create an opportunity to open up the lingerie retail sector, making online retail more accessible to vulnerable women who have had breast cancer treatment.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
LEARNING LABS LTD	Independent digital assessment and learning for vulnerable pupils	£49,223	£49,223

FlashAcademy learning and assessment is a new app platform that will help vulnerable pupils to more easily continue learning, inside and outside of school. Teachers will be able to use FlashAcademy to remotely set short 'English proficiency' assessments and learning modules that are tailored to the needs of each pupil, helping to ensure that students are provided with independent learning that can be completed on a smartphone, tablet or PC from any location - including the dining room table at home.

The platform will use 'machine learning' to keep challenging pupils in an appropriate way and also delivers learning from 45 different home languages, for children who do not have English as their first language.

Being able to remotely deploy short digital assessments provides teachers with a more flexible way to keep track of pupil progress and ensure that no pupil is left behind. This is particularly important for vulnerable pupil groups, such as the 1.5m pupils that do not have English as a first language and those with SEN or high literacy needs.

FlashAcademy has been developed by Learning Labs, a UK EdTech company based at the Innovation Birmingham Campus. During the current pandemic, their independent technology has already been used by more than 60,000 school pupils in the UK, as well as by schools in China and Italy. Innovate UK funding is helping the team to develop a fully digital 'English Proficiency' assessment platform to assist teachers with their ability to maintain learning progress outside of a school setting. The project is seeking to save a proportion of the c.2m hours of teacher time spent each year using paper-based assessments, whilst also providing real-time access to data and reporting.

As a second step, the project will also launch the assessments and learning platform for business, working closely with the manufacturing association, MAKE UK. FlashAcademy Workplace will help companies to deploy independent 'English proficiency' assessment and learning for their employees that do not have English as a first language. This new form of digital training will focus on 'Health & Safety' to help keep more employees safe and technical vocabulary to help improve digital training. This will be an important new innovation for the construction sector, where it has been shown that migrant workers are twice as likely to die on site due to their lack of English proficiency (source: Irwin Mitchell and the Centre for Corporate Accountability, 2009).



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
LABOURS OF HERCULES LTD	Magic Mountain - Application capability expansion	£49,910	£49,910

Magic Mountain is a revolutionary app, helping to transform global health through the power of social technology. By bringing people together through shared experience and collective achievement, we encourage genuine, long-term lifestyle change. Users partner with friends, colleagues or team-mates on a joint commitment to burn calories over a regular basis, and work together collectively to achieve that goal and climb their 'mountain'.

Even before the current global pandemic, the developed world faced twin crises of obesity and loneliness, with 65% of people in the UK living a sedentary life and 53% of people feeling lonely. The popularity of health clubs and fad diets amply demonstrated people's desire to get fitter, but with 72% of gym memberships inactive and 64% of UK adults overweight, it was clear that traditional approaches were not working.

The social distancing measures introduced in response to the COVID-19 pandemic have exacerbated both of these trends. Research suggests that 85% of people in the UK are engaging in no daily moderate exercise, whilst isolation has placed severe strain on people's mental wellbeing. As a society, we need to help our people to live more healthily, by making fitness fun, and to forge more profound connections with each other through digital channels.

Funding from Innovate UK will be used to assist this effort by rolling out our Corporate Wellness platform - built on the strong foundations of our existing iOS app. This project will comprise (in the following order of priority): market research, requirements gathering and design of the Corporate interface for the Magic Mountain app, and subsequent development and testing of said Corporate interface. This project will enable employers in the UK and globally to deploy Magic Mountain as a branded tool within their organisations, helping their people to become more active, healthier, and better connected to one-another. As a social fitness app, Magic Mountain is entirely compatible with existing lockdown restrictions, but longer term we expect to see a greater degree of homeworking, making digital connectivity all-the-more vital for companies, employees, and societal wellbeing.

Magic Mountain is unique amongst fitness apps in combining the powerful principles of gamification and group psychology to inspire users to live more healthily. It is built on the proven principle of public commitment and shared obligation, and on rewarding users for every calorie burned. The app is live on the iOS App Store where it is five-star rated.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
GO-OP CO-OPERATIVE LIMITED	Low carbon transport improving respiratory health	£50,000	£50,000

GO-OP's project is the modification of existing, underutilised UK rail rolling stock for low carbon regional railway operation on non-electrified routes -something not previously attempted in the UK. Existing IPEMUs are yet to be deployed commercially and are relatively low specification, with advertised ranges of no more than 60 miles and top speeds of 75mph. While this is adequate for short routes and branch line operation, it is not capable of making the regional connections needed to achieve a modal shift away from private transport outside the London commuter belt.

Fast charging systems are close to deployment, with network certification expected this summer; and slower systems using traditional pantographs are also readily available. but in order to make full use of them without loss of performance it is essential that at least some existing rolling stock can be adapted for battery operation over longer distances on high speed main lines without adding excessive weight.

We will reduce the demands made on the battery pack by using computer modelling of airflow to design aerodynamic farings. Fitted to carriage ends, these could reduce energy losses from wind resistance by 5% at speeds in excess of 70mph. Conversion of braking systems to recapture kinetic energy could reduce the necessary battery capacity by a further 5-10%.

Our solution for battery mounting will draw on the 2015 Electrostar project carried out by Bombardier. This required a battery array of 500kw, mounted on three battery rafts on the underside of a class 379 trainset. We plan to use an array almost twice the size, mounted on different rolling stock and capable of more rapid charging. Our innovation will take the experimental demonstrations and move them to commercial application on a route in the south west region where electrification is a particularly remote prospect.

By its nature, public transport will always have limited capacity for social distancing. However, the need to control the weight of the rail vehicle (and hence the weight and cost of the batteries it must carry) is compatible with measures that improve passenger comfort and personal space -- such as more tables, and more widely spaced seating -- and limit maximum 'crush loading'. In addition, there is now much better awareness of the value of face masks and hand sanitiser in reducing the spread of all diseases, not just Covid-19\. These should from now on be available as standard on all trains.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
FOURTH STATE MEDICINE LTD	Nitric Oxide (NO) inhalation to treat COVID-19: coupling in-situ NO-generating modules to ventilators	£49,577	£49,576

COVID-19: in December 2019, the Wuhan Municipal Health Committee identified an outbreak of viral pneumonia of unknown cause. Coronavirus RNA was quickly identified in some of these patients. This novel coronavirus has been designated SARS-CoV-2, and the disease caused by this virus defined as COVID-19\. This disease has now become pandemic, and with well over 1 million confirmed cases, 100,000 deaths and a case fatality rate that exceeds that of influenza by at least an order of magnitude. COVID-19 represents a substantial challenge to healthcare systems and economies worldwide.

Nitric Oxide (NO) gas: (not to be confused with Nitrous Oxide, N2O, or Nitrogen Dioxide, NO2) is produced naturally by the body for controlling numerous bodily functions (e.g. blood flow, wound healing, inflammation) and as a potent antimicrobial (including against drug-resistant bacteria, fungi and viruses). NO inhalation therapy, in which NO gas in controlled concentrations is delivered to patients' lungs via ventilators, is an approved treatment for a number of respiratory conditions. Currently approved NO inhalation therapy systems mix NO gas, stored in large compressed gas cylinders, with air flow for breathing. NO inhalation is currently being investigated by several research groups worldwide for treatment and prevention of COVID-19 - the therapy previously showed promise during the 2002 SARS outbreak.

Problem: assuming the therapy works in clinical studies, key barriers remain to rapid, widespread and cost-effective deployment. Current systems using compressed NO gas cylinders are prohibitively expensive (£100/hour over several days of continuous treatment) and only available for niche use - scaling up delivery to address COVID-19 would be expensive and logistically impractical.

Potential solution: plasma technology (electrically ionised gas, the fourth state of matter after solid, liquid and gas) can produce NO in-situ from air (nitrogen and oxygen). Coupled in-line to existing ventilators, Fourth State's compact, modular and affordable plasma devices could intelligently deliver NO in the flow of air to the lungs, using just electricity as an input. Our devices have previously been independently verified by UK universities to produce NO in controlled quantities, with corresponding known biological effects (antimicrobial action, accelerated wound healing processes).



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
AIX LIVE LIMITED	AIX CUSTOMER APP	£48,672	£48,672

AIX Live is a unique, immersive viewing experience for sports & entertainment. Designed from the ground up with social distancing in mind, the venue utilises innovative technology to ensure that not only is the environment safe for attendees but extremely convenient and engaging. The app which is being developed as part of this project will make it easy for both customers and staff to practice social distancing measures whilst enjoying this unique experience.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
UCAN PLAY LTD.	INTERFACE:RESPONSE : A Training, Mentoring and Support programme in Digital Skills for Musicians	£49,882	£49,882

Musicians have been hit hard by Covid-19\. They are unable to rehearse together, perform, or undertake other face-to-face activities including teaching. Many of the clubs, pubs, restaurants, arts-centres, concert halls and theatres within which musicians work will be closed for the foreseeable future. It will not be possible to run tours and larger-scale musical events for a long time.

Most musicians have a portfolio career, with rehearsing, creating, performing and teaching activities forming key activities in their working lives. The Internet offers opportunities for them to relocate their work in each activity and monetise this appropriately. To do this effectively, many musicians will require training to develop their digital skills and ongoing support to assist them as and when problems arise. We have already seen pioneering individuals and ensembles creating innovative solutions to some of the key activities musicians undertake. Yet the technological solutions they adopt are often not explored or shared. They often rely on a significant set of additional technological knowledge or skills that the majority of musicians do not possess.

The key aim of INTERFACE:RESPONSE is to quickly create a set of training resources, mentoring opportunities and wider support for individual musicians and their ensembles to enable them to build their digital skills, relocate their core activities online and build new income streams.

The resource will include:

* A training programme for each key activity (rehearsing, performing, teaching, creating and curating). Each programme will include case studies, interactive training resources, technical and creative activities and other elements as appropriate.

* A mentoring programme for all musicians wanting to develop their practice in these core areas. We will recruit and train mentors drawn from across the UK. Mentors will be assigned a small group of musicians to support as they begin to develop their practices in these new areas.

* An online forum will be created for musicians to help support each other, using the principle themes of the training and mentoring programmes as key areas.

* A dedicated email and telephone line will be established to support musicians in their new activities.

The resource will be made freely available to musicians across the world. The mentoring programme will be available in the UK only.

UCan Play is working collaboratively with its parters in this project, including the Musicians' Union and NYMAZ. Through these partnerships, we will have direct access to 34,000 potential users.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
INNOX TRADING LIMITED	Digital prescription integration platform between NHS funded charity and mail-order Pharmacy.	£48,880	£48,879

We will be building a bespoke private prescription platform that works with both private organisations and NHS contracted organisations such as charities to upload prescriptions that we will subsequently dispense direct to consumer/patient using fully tracked and traced delivery.

Eliminating the need for the patient to visit the pharmacy to collect medicines or indeed visit the organisations for a consultation. The consultation can be carried out remotely by the provider, whilst we support this with technology that allows the clinician to write a digital prescription and transmit to us through a secure network for safe shipment to the patients home via fully tracked delivery.

The platform will integrate with PMR software, Microsoft Dynamics BC ERP system and carrier software within the Pharmacy.

This project will initially move a current "in-clinic" healthcare model to completely virtual, which will ensure continuity of service during the COVID-19 pandemic. This new service can extend beyond the lockdown restrictions and allows the charity to offer a remote healthcare model ongoing in their organisation. Protecting the health and well-being of both clinician, patient and pharmacist.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
NUMITOR LIMITED	Covid-19 Tactical Lockdown, ePPE & Contact Tracing	£49,605	£49,605

The solution draws on publicly available information and data to analyse activity. By establishing physical human contacts and places frequented such as supermarkets, clubs and workplaces the solution identifies potential risks within an individual's network. Using open source data, publicly available and consented social media information it can traverse a digital network and determine the specific risks to negate the need for mass lockdowns. Currently no solution exists that is able to do this.

A national lockdown policy delays and hinders the re-mobilisation of the economy and as time progresses will become less palatable by the general public. A tactical lockdown approach allows a controlled exit strategy to full economic mobility.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PIRATE STUDIOS LIMITED	Building a Monetisable Platform for Digital Gigs	£49,061	£49,061

Our project vision is to create a viable alternative to physical gigs allowing artists to monetise their performances when travel is restricted.

The issue currently highlighted by the Coronavirus lockdown, is that artists are struggling to earn cash due to gigs, festivals and tours being cancelled, with no certainty on when they will return. In order to solve this, we are building on the existing livestreaming technology provided in our 500 UK studios to allow artists to gig remotely through our own digital gig platform.

We will provide the instruments, hardware, private livestreaming solution, ticketing platform and two-way interaction between artist and fan to best recreate the physical gig experience in a digital environment. We are developing this solution so it will work both in our studios and at customers homes, should another lockdown be required.

Through this solution we hope to achieve the following:

- * Boosting the economy providing alternative revenue streams for artists and venues when movement is restricted.
- * Democratising live shows providing fans located in places where artists can't travel with access to private gigs with their favourite performers.
- * Going green helping reduce carbon emissions as digital gigs have no travel requirements.

There is no existing platform that accurately recreates the physical gig experience by providing instruments, tickets, private shows and two-way interaction between artist and fan that consumers crave. We aim to provide a solution that will tackle this in a way that allows artists to find alternative revenue streams and provide consumers with the intimate experiences they crave.

The idea is not to replace live shows but provide an alternative when a physical gig is not possible due to conditions such as pandemic, challenging geographical locations, complex political situations or other reasons that might restrict an artist or fans from travelling. Our view is that digital gigs will significantly increase the overall market size for all gig types by increasing accessibility.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
GROVE DESIGN (PEMBRIDGE) LIMITED	Clear Face Mask	£49,733	£49,733

The design and prototyping of a clear face mask which allows lip reading for those who are deaf or have hearing loss.

The COVID-19 situation means that healthcare professionals must become used to wearing Personal Protection Equipment (PPE) including face masks. Furthermore, there may be the need for a societal adoption of widespread face mask use. Face masks obscure the mouth; this interferes with lip reading and more widely with natural social interaction.

The mask will allow more vulnerable patients to be reassured by better seeing their healthcare professionals (a comforting smile).



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
HYDROCHEM (U.K.) LIMITED	Rapid Bottling Plant	£49,502	£49,500

Application for a grant to install fast filling and aerosol filling machinery.

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

Funders Panel Date: 04/06/2020



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
THE BARIATRIC CONSULTANCY LTD	AI powered digital service for tracking, supporting and managing obese patients during and after Covid-19	£49,891	£49,891

Obesity directly costs the NHS £6.1bn and wider UK society £27bn. 16.2 million adults in the UK are clinically obese(30.1%). Obesity has been cited alongside underlying respiratory illnesses as the main underlying condition risk factor in the hospitalisation rate for COVID 19\.

Specialist services aimed at tackling obesity through psychological, lifestyle diet and pharmacological support have been largely paused during the lockdown period affecting an estimated 500,000 people that were utilizing these services, which is having a drastic impact on the mental and physical health of this high risk group of the population. Little is known about the progression of Covid-19 amongst this population.

There does not exist a remotely delivered specialist service that conforms to the guidelines laid out by NICE that is accessible by anyone who is clinically diagnosed with obesity. Existing service providers face high overheads and costs associated with delivering face to face and the NHS commissions fewer of these services as a result. One such provider of services - The Bariatric Consultancy has had a successful track record in using different digital technologies to deliver remotely and has selected Healum (provider of digital health technology platforms), to help design and develop a remotely specialist remote digital service for obese people that also generates insights around the presentation and progression of COVID-19 amongst this at-risk group .

It will enable people who were previously accessing face to face services to continue to manage their health during current and future COVID restrictions, whilst addressing the lack of access to these services through productivity gains that will enable providers to reduce the cost of provision and provide services at a larger capacity. The technology will provide valuable insights about how effective different combinations of interventions and services are across the country for people that are clinically obese, as well as how COVID symptoms progress and develop amongst this high risk group. The feasibility of using machine learning algorithms to generate daily personalised recommendations will also be tested to boost productivity.

The efficacy of the remote service will be evaluated by the Bariatric Consultancy using patient questionnaires, patient reported outcome measures and inapp analytics. Changes in productivity and capacity will be evaluated comparing costs of different combinations of delivery before and after, whilst the technical feasibility of delivering the service will be addressed by developing the platform and infrastructure to be able to cope with 5,000,000 uk patients and 50million globally.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
SAGE QUALIFICATIONS LTD	Remote Learning and Proctored Assessment for Isolated Learners	£49,884	£49,884

We are an online provider of accounting courses and qualifications into Universities, Colleges, Prisons and Private Providers. Because we provide accredited qualifications, many of our courses are used in a classroom and tests are invigilated which, due to COVID-19, could not be run.

A second issue was that normally certificates are provided to institutions to securely distribute to candidates. The overall impact of the cancelling of classroom learning, exams and delaying the issue of certificates was that learners were in danger of not completing their degree or qualification and therefore losing out on jobs and career opportunities.

We needed to quickly adapt our courses and systems to provide different solutions that fully satisfied university and awarding body requirements in terms of validity, quality, authenticity and robustness.

Our responses include:

*provide learners with access to software and learning materials at home and support them to use it on their local/home machines.

*find new systems to enable remote invigilation

*look to develop new highly secure automated marking systems

*evidence the successful completion of the exams using digital badges (in addition to certificates).

The 'watermarked' badges provided detailed information of the qualification awarded so that even without a formal certificate, candidates are able to prove they had successfully obtained the qualification to a prospective employer.

We are keen to use the systems developed to make a contribution to the national response to COVID-19, and provide resources for school children and people looking to learn useful accountancy skills for business and home.

We want to create something, easy to use, using simple terminology. We propose an online, interactive course, which is ideal for anyone who is new to bookkeeping and accounts.

This will be free of cost to the learner.

The course will suit learners wanting to explore how to run a successful business, work in an office, or anyone wishing to learn how bookkeeping and accounting works in a business environment, to give an overview of the importance of financial control.

This project will support people to develop certifiable and, importantly, verifiable, skills which will aid employability as employers can be assured that the

learner can 'hit the ground running' and be if immediate use to them. It will increase entrepreneurial skills as learners understand how to run and control a business.

Entrepreneurial and business skills will both be important in order to 'kick start' the economy after the COVID-19 crisis is over.



Competition Code: 2005_CRD_CO_COVID19_R2

Total available funding is £40,000,000 rounds 1 and 2. £7,000,000 for this round

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BORN DIGITAL HEALTH LTD	Digital Sleep Intervention for Children and Adolescents	£49,688	£49,688

Covid-19 presents a clear impact on sleep patterns for people under the age of 18\. Sleepstation want to provide a digital health intervention by providing short, mid and long-term solutions to support those that are suffering.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BETTERTRACK LTD	Social Care Tracker - Proof of Concept	£49,920	£49,920

This project involves developing and proving a social care tracker that can be used by providers to better report performance to commissioners and NHS stakeholders.

It improves the quality of data available for local, regional and national responses to the pandemic and addresses the problem providers face producing bespoke reports for commissioners.

The project aims to deliver the following:

* a library of standard indicators developed collaboratively between providers and commissioners - focus is on lead indicators to better tackle challenges from the pandemic and to drive performance improvement aligned to NHS outcome frameworks.

- * automated indicator value generation with provider only and commissioner, regional and national access for secure and confidential reporting.
- * feeds from vendor systems standard and configured for more accurate indicator reporting.
- * role based access to indicators via a modern user interface with standard tiles, charts and statistical process control visualisations.

This project also aims to establish a broad community of early adopters & stakeholders:

* Provider Governance, Operations and Reporting teams - supporting their needs for better tools to manage, control, report and improve performance during and after the pandemic.

* Commissioners and funders - promoting efforts to standardise reporting for domiciliary and care homes focusing on lead indicators to complement NHS outcome indicators.

* NHS England and Digital NHS - ensuring alignment with national initiatives, frameworks and tools.

* Vendors -- who have an interest in supporting users to get the most out of their application investments including better and automated reporting for commissioners.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
REPLY LIMITED	Development of E-munity - an application for digital immunity certificates for Covid- 19 infection	£49,647	£49,646

As hospitals are overwhelmed with infections of Covid-19, and the UK economy faces dire times, governments need to think about a way to allow residents to return to society safely, and prevent such situations from happening in the future. This can be accomplished with a simple digital application called an E-Munity app, which provides the individual with a digital immunity certificate showing verifiable proof that the individual has developed immunity to Covid-19 infection. The immunity is developed either through recovery from a confirmed case, by doing an antibody test (if the person never showed symptoms), or from eventually receiving a vaccine once one becomes available. This will allow residents to show a digital certificate to police, employers, TfL rail staff, social venues security guards, and airport border force when travelling. Any stakeholder that desires comfort in knowing that the individual has been tested and is indeed immune to the virus can scan a simple QR code and using advanced technology built into the application that locks any personal data from being copied or hacked, can use that QR code to verify the person's immunity status. No personal data ever leaves the NHS system to be stored on individual smart phones or devices, and thus is not at risk or susceptible.

The project will be carried out in 5 weeks of rapid development and deployment by Reply Ltd, the UK entity of the wider Reply Group, who have a global reach and a developer and support community to ensure that the application can be deployed effectively, secured properly, and meets all UK government requirements.

The E-Munity app can be multi-purposed to ensure that no similar dire scenario as today's lockdown will ever occur to the same extent during a future wave of Covid-19 infections, and can be adapted to use in other standard immunisations or travel immunisations, rebuilding trust in the UK's approach to handling transmittable infections, supporting the NHS, and saving lives, while at the same time supporting economic stability for residents.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
3P INNOVATION LIMITED	Emergency Community Visor Production	£49,454	£49,454

The rapidly developing COVID-19 and ensuing PPE shortage has left the NHS resorting to lots of hobbyist grade or improvised visors to provide basic protection while treating patients. We are shipping an open sourced 3D printed design at the moment but are bottle-necked by prototype processes.

The visors are one of the best methods of infection prevention due to their coverage of the eyes, nose and mouth from air borne particles, along with a physical barrier that prevents the touching of the face with contaminated hands. It also effectively stops transmission from coughs or sneezes from the wearer of the mask itself, again preventing infection spread.

This project aims to take a proven concept through regulatory approvals, and set up a hardened manufacturing supply chain and process to support the volumes the NHS really requires.

The project will focus on re-designing the concept to suite a mass production process (injection moulding), getting regulatory approval for the design, establishing a supply chain, sterilisation process and a logistics concept to ensure this supply can match demand. We need to move incredibly quickly to combat this crisis and advance work has already began in this area.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DIGITAL INTERRUPTION LIMITED	Tooling to Expedite Pipeline Based Security Testing (REX)	£49,858	£34,900

Whether it be to communicate with our family and friends, pay our bills, or order goods and services online, we all use software; increasingly this is via smartphones and tablets. As consumers, we trust that this technology is secure, tested and safe for us to use, but this isn't always the case. Security testing isn't mandatory, so it's up to developers to decide how, or indeed if they want to do it.

Digital Interruption are not just experts in security, we're also developers. We want to make security testing easier for developers, so we take the tools we use in penetration and security testing and develop them for software engineering teams. Instead of a complex manual tool used for security testing, we've developed software tooling, REX, that allows companies to integrate the security test into their development pipelines. Our tools are not archaic command-line tools that require a deep understanding of the platform to set up and use, but instead they are tools that have APIs in order to manage scanning and develop of test cases.

We've created a web application frontend that allows anyone to easily perform a security test at all points in the development process, simply by dragging and dropping the application into REX. We've also developed a Jenkins plugin that can be set up to perform a security scan every time an Android application is built. Using the plugin, Jenkins can automatically fail the build, informing the developer that a security issue is present.

As the scans are automated, it means that software developers have the benefit of having the scans run every time the software is built, rather than a more traditional approach to security which is having scans run every 6 months to a year. This gives greater feedback, better visibility and catches issues that may be reintroduced, enabling continuous detection and remediation, and resulting in safer software.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CODEGATE LIMITED	Automated unmanned store reduces infection risks	£49,452	£49,452

The 'G1 Store Panel' is a new way of creating a fully automated unmanned store that's open for business 24 hours per day, 7 days per week. Supplied flat pack, it can be quickly built into any standard shipping container and be fully operational within minutes of being powered up. No store person required, so no need for PPE and social distancing measures. Using passive UHF RFID technology in a revolutionary way the store does not have a manual check-out out, but records every transaction and maintains inventory accuracy above 99 percent. Access to each store is restricted to personnel issued with unique identification, and transactions are recorded against each individual. Most items in the store will be RFID tagged, but smaller low value items can be tracked too using a revolutionary smart bin system.

Containerised stores can be quickly deployed to any location, for example a construction site or rail siding. Only mains power is required; solar panels and a wind turbine could be used to make them fully autonomous. They can contain any mix of tools, hire equipment, and consumable items. Using a secure web portal, store managers can view details of every transaction, what the inventory levels are in the store, which items are fast moving or have never been transacted, and what is the utilisation of hire items. That gives them the ability to adjust inventory to suit the customer and local requirements.

Since stored can be dropped in at the point of activity, time and money is saved not having to travel to shops and depots for goods, which can significantly reduce the carbon footprint of the operation. Since all transactions are recorded against individuals, making them more accountable, damage to tools and assets is dramatically reduced, cutting the level of contingency costing required for a project.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADIA HEALTH LIMITED	Transforming women's health to digital first in the wake of Covid-19.	£39,196	£39,195

Millions of women each year face a range of health challenges such as endometriosis, infertility, menopause and more requiring specialist support. These challenges, if not addressed, lead to deteriorating health thereby increasing future challenges and pressure on the health system. Prior to the Covid Pandemic access to such support was already limited. Yet the pandemic has made access almost non-existent due to social distancing, pressure on frontline health services, and the closure of private health businesses.

Our solution is to shift women's health services to a digital-first approach to provide a platform to enable a digital-first approach to assessing, supporting and monitoring women's health needs. We will provide a platform enabling women to easily self-assess their health and access trusted care and while empowering healthcare providers to deliver services online. We will build upon our existing technology platform to deliver telemedicine and self-assessment support services including the following key resources:

- 1. Diagnostic tools including online assessments and at-home testing
- 2. Guides to provide science-based support for common challenges such as PCOS, endometriosis and miscarriage
- 3. Expert-led courses to connect women with each other and with experts directly
- 4. Al-enabled personal health profile to assess and monitor remotely
- 5. Partner toolkit: 3 pilots providing a toolkit to GP offices and women's clinics for their patients

Women will be able to easily assess their personal health at home online, identify actions needed, and access health professionals for ongoing support. For GP offices and health business we will provide a digital resource empowering them to deliver enhanced care as GPs often lack specialised expertise in women's health and specialist clinics often lack capability in technology and data science.

We anticipate the Covid Pandemic will fundamentally change our societal behavior in terms of how we access a wide range of services. This project will provide women with greater access while positioning care providers to more efficiently online. Longer term we anticipate benefits of reducing stress on the public health system and frontline primary care providers, increasing economic opportunity for healthcare workers, and improve health outcomes for millions of women.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
SYM-WALL PLANT ENGINEERING LTD	Coronavirus - Aqueous Ozone Disinfectant Dispenser System (AODDS)	£49,819	£49,819

Sym-Wall Plant Engineering Ltd (SPE) of Eastwood, Nottinghamshire is pioneering the development of a new scalable, industrial aqueous ozone disinfectant dispenser system (AODDS). Termed "Sym-Hawk" the system delivers a formidable de-activation of the SARS-CoV-2 virus strain and is designed for rapid and thorough decontamination of ambulances, buses, trams, trains, care homes and public spaces including offices, shops, restaurants, gymnasiums, theatres and arenas. The system is scalable and can also be applied to decontaminate large spaces including rail stations, airports and even cruise ships.

The system is based on the delivery of an optimal "aqueous ozone mist" which transports the ozone efficiently to all contact surfaces within the environment, leaving the area fully decontaminated for safe follow-up use and occupation. The system is deployed as a stand-alone and self-sufficient dispenser in fixed, mobile and transportable forms. With its on-board supply of water and power generation the system draws in the local ambient air which is purified and processed to produce the required ozone mist in the correct composition and form for the efficient eradication of the pathogen.

The benefits of the system are its thorough effectiveness in killing the virus, the speed of its decontamination process and the absence of any adverse postcleansing effects on human health, the ozone reverting rapidly to breathable oxygen again after the anti-virus process. By avoiding the side-effects of traditional chlorine and chemical based disinfectant, and with no toxins or pollutants, the system represents an effective, healthy and eco-friendly solution for the current crisis and into the future.

The AODDS can be deployed in different scaled options and is suited to a range of private, community, commercial, government and defence applications. Since it does not require replenishment with expensive chemicals or disinfectant products (only air, water and electricity are required) the recurring operating costs are minimal and the system is affordable in all sectors. It is intended that "Sym-Hawk" will play a major role through and beyond the current pandemic crisis in helping to establish health, safety and reassurance as the country returns to a "new normal" lifestyle.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
SCRUBBINGTONS LIMITED	Development of a safe children's hand sanitiser	£49,800	£49,800

Covid-19 has increased the need and awareness for better hand sanitation that is likely to be a lasting legacy of the epidemic. However, this is proving problematic for children for a number of reasons:

1\. Their young, developing skin is especially prone to contact dermatitis from repeated washing.

2\. Many hand sanitation products are chemical laden, abrasive and do not contain moisturisers

3\. When they can't wash their hands, the majority of hand sanitisers contain 60%+ alcohol which are not safe for them to use unsupervised due to the high alcohol content.

As the lockdown restrictions begin to be loosened and children start to leave the home, returning to school etc. the need for children to be able to continue with good hand sanitation safely and independently will be vital.

Scrubbingtons is a range of natural, foaming children's personal care products specifically designed for their needs and in particular, to promote independent use safely. All our products are tested as suitable for sensitive skin. We already have a successful foaming hand wash with a refill pouch - sales of which have grown exponentially in the past 3 months during the Covid-19 crisis. This project aims to ensure children's hand sanitation needs are properly met as the lockdown restrictions ease (e.g. returning to school) by developing a foaming, moisturising, alcohol free, natural hand sanitiser in three formats - a family pack for the 'front door', an 'on the go' pocket pack for the school bag as well as a refill pouch. This will be effective against 99.9% of bacteria and be safe for children to use independently without adult supervision.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BLUESKY EXPERIENCES LTD	Virtual Experiential Team and Leadership Development Platform	£49,711	£49,711

This innovative project focuses on the necessity, to support remote leadership and team working during and post Covid 19\.

The project will disrupt the experiential training sector with the first virtual platform to host experiential leadership and team building activities, allowing organisations to equip their teams with an effective self-directed learning or facilitated programme.

Additionally the online experiential training programmes will enable leadership and team development programmes to become accessible to many more teams and organisations.

The project has a number of clear objectives; to develop an easy to use, online platform containing experiential training programmes, enabling facilitated or self-directed learning for remote leaders and teams.

The online training program has its foundations in our face to face experiential learning programmes and the value they provide to the learning achieved by leaders and teams. It is vital that the virtual experience creates a similar level of experience stimulating real behaviours, meaningful conversations and learning points, supporting improved leadership, performance and team resilience.

Covid 19 has increased the level of remote working and is highlighting the many challenges teams are having to overcome. Such as, how do we cultivate team spirit without face to face interaction? How do we onboard new team members effectively? How do we communicate effectively, agree on a common language and approach?

Our experiential programmes will work to support teams in developing action plans to combat these challenges and increase productivity for their organisation through effective remote working.

This project moves to support the new way of working, post Covid 19 with an innovative approach, equipping leaders with new knowledge and helping remote teams leverage their strengths and overcome the challenges of remote team working.

An additional benefit of this online programme is that it will support the creation of a blended learning approach for teams who are also engaging in face to face workshops post Covid 19\. Through the use of technology, learning commitments and actions will be captured for reflection and use, an important part of the team development process often overlooked in purely face to face training.

Finally, this unique platform and training programme will promote efficiencies in training, improve diversity and inclusion in organisations, engage a broader UK talent base and improve opportunities for returners.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
WANANCHI LIMITED	Sterilising equipment for hospitals, ambulances and schools	£49,154	£49,154

The Wananchi mobile disinfectant generator produces a non-toxic sterilising solutions that destroys pathogens including viruses and bacteria from just salt and water.

Our machines can be used within minutes and produce almost limitless supplies of sterilising solution. They are easily transportable and are designed to be used in areas of greatest need. They are ideal for sterilising ambulances, wards, schools, business premises and homes and can be used in condition with decontamination tunnels.

The sterilising solution we make is 100% non-toxic for humans; it only destroys dangerous pathogens.

Our units are designed to deliver large volumes of cleaning solution which can be used as a mopping or wiping agent or integrated into a decontamination shower booth. Critical workers like Care workers, visitors, Doctors and Nurses can be misted with our solution and decontaminated in less than 2 minutes. Using our solutions in this way prevents infectious transfers from sterile to non-sterile areas of operation. It could also be used to rapidly increase release of certain sectors from isolation protocols.

The rapid costs and time savings offer huge benefits to anyone working in areas where dangerous pathogens can be transferred onto non-disposable equipment or by person to person transmission by creating safe transit zones from sterile to non-sterile areas of operation.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
HEALTHSHARE LIMITED	Digital Wellbeing Platform for MSK NHS Waiting List Patients	£49,845	£49,845

Need/Vision: Elective surgery across all NHS Trusts is suspended whilst front-line services prioritise escalating coronavirus admissions. This news is devastating to the 4.42 million patients who have sat on a long waiting-list, especially the 1.1m Musculoskeletal (MSK) patients waiting for joint-replacement or spinal-surgery, unable to walk, work, live independently or suffering significant pain.

In January 2020, 22% of patients were waiting longer than the Governments maximum 18-Week Referral-to-Treatment targets and now because of pandemic impact, wait-times will soar further. According to Royal College of Surgeons statement in the Health Service Journal on 14.04.20 **_'Mountain wait-lists will take up to 5-years to catch-up'_**. Healthshare therefore want to offer a **'digital safety-net'** that cares for MSK waiting-list patient's physical health, mental health and wellbeing during this unprecedented time for the NHS.

Focus/Objectives: To combat the harmful impact of delay on waiting-list patients, we will rapidly develop and roll-out a multi-media, online **Digital MSK Wellbeing Platform** that will reach-out to and support patients in their own home whilst they wait for surgery. Our principle aim is to ensure NHS patients do not feel forgotten, loose hope, deteriorate or develop avoidable co-morbidities whist they wait for a procedure. Additionally, the programmes within the Digital Wellbeing Platform will ensure patient's pre-operative health and holistic wellbeing is maximised, so they can achieve the best clinical outcome from their MSK procedure when they eventually get it.

Innovation: The Digital MSK Wellbeing Platform will feature the following innovative digital programmes:

* **Condition Specific, Preoperative Exercise and Wellbeing Programmes -** led by leading Orthopaedic and MSK Specialists, expert Rehabilitation and Physiotherapy Practitioners and experienced Biopsychosocial Wellbeing Coaches to maximise pre-rehabilitation activity, mobility levels, motivation and emotional health to minimise patient's symptoms, pain and analgesia usage

* **Condition Specific Videos, Podcasts, Presentations, Infographics and Easy to Read Patient Information and Guidance -** to improve patient-literacy and achieve and maintain optimum health awareness, so patients are clear about the healthy lifestyle choices they need to make to remain 'fit for surgery' and become prepared and resilient enough to make an uncomplicated and speedy recovery when their time comes for a procedure.

Patients can access the Digital MSK Wellbeing Platform via a simple URL-link, from any device, PC, laptop, tablet, SMART-television or SMART-phone. The service will be free to any NHS patient waiting for joint replacement or spinal surgery, without any commercial implication or obligation to Healthshare whatsoever.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
TARGETT BUSINESS TECHNOLOGY LIMITED	RIVIAM Wellbeing Action Management	£48,450	£48,450

As the COVID-19 pandemic unfolds creating unprecedented demand on the health and social care system, RIVIAM's project will enable a digital transformation in the way healthcare, local authorities and third sector organisations can work together to deliver care for a community.

We will enable teams from across these organisations to better co-ordinate, collaborate and communicate through creating a secure digital care ecosystem on RIVIAM.

Currently, joined-up efficient working across health, social care and the third sector is thwarted by a reliance on systems and social prescribing platforms which don't interoperate, and a dependency on 'old school' email, phone and spreadsheets to share information introducing risks and time delays.

This project will create the transformational ability for healthcare, social care and third sector partners to track and share tasks and actions about people's care and to instant message and share information on the RIVIAM platform.

Third sector organisations will be empowered with new digital capabilities and will have secure access to the patient's care record, giving them information on a person's history. Health and social care commissioners will be unlocking the potential of their commissioned third sector services and have the data they need to track outcomes. They will be able to use this service to monitor the effectiveness of commissioned services?to improve the return on value for stretched budgets.

Each organisation can maintain independent working using their own system for care delivery but use RIVIAM as a 'digital bridge' to communicate and collaborate with others.

This will link healthcare, social care and third sector partners together so they can work as one true partnership harnessing their collective power to deliver for people in need. The project will unlock value across the system by removing duplication, saving time and keeping vulnerable people out of hospital. It will involve a trial in Bath and North East Somerset (BaNES) with a healthcare provider, the local council and third sector groups.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CLOUDFM INTEGRATED SERVICES LIMITED	Smart UV Integrated Disinfection	£49,998	£49,997

Covid-19 has impacted us all directly. The pandemic is global and we are all united in our desire for a solution. Through Cloudfm's award winning innovation and key partnerships, we are aiming to do our part.

Cloudfm are an award-winning Facilities Maintenance (FM) solution company, leading the FM market with internally developed technology, backed up by the best people and the most stringent processes. Cloudfm's approach to innovation and controls have led them to working for clients such as Pizza Express, KFC and Tui. They have recently taken the decision to brand and sell their own in-house IoT solutions direct to market.

This project proposes the development of an Intelligent IoT platform to support on-demand fast and effective bulk disinfection of reusable operational items, equipment. The platform will incorporate a low cost IoT device combining high intensity UVC lighting with wireless sensing such as occupancy and sound to provide a reactive safety critical closed loop control system. The system would be designed to be installable in any stationary enclosed space into which items to be disinfected could be positioned for cleaning. It will be important to identify locations close to ICU wards in order to maximise the impact of the installations.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
AISYMMETRIX LTD	Delivering critical supplies by drone to self isolating people	£48,869	£48,869

This project will use the world's first aviation-grade B2B drone delivery 'as-a-service' platform to do a UK test of the delivery of medication and critical supplies to elderly and vulnerable people in a suitable rural town.

This proof of concept and subsequent pilot will explore and demonstrate how digital technology can support local communities, and the increased demand for delivery as a result of the COVID-19 pandemic. This will, in particular, demonstrate the capability of delivery with no human contact, and the associated reduced infection risk, as well as enabling faster, more frequent, provision of critical supplies.

This technology can provide immediate impact to the pilot community and be of great value to the most vulnerable people in the future as it will allow us to demonstrate how we can help them with new forms of innovation in the coming years.

Through group company, Manna, this service has already piloted in Ireland delivering critical food supplies and prescription medication to the Moneygall community from Barack Obama Plaza, with permission from the Irish Aviation Authority and the Irish health service.

The Manna drone fleet - which is autonomous - is operated by Manna directly from the pharmacy, or food outlet and is accessible via API to governments, food tech providers and online food platforms alike in a channel-agnostic manner. One fleet for all demand.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
SAM LABS LTD.	STEAM Education at a distance	£49,519	£49,519

SAM Labs (www.samlabs.com) wants to address the need for affordable, manageable, and engaging resources for students and teachers to achieve government-mandated levels of Science, D&T, Computing, Maths, English, and Music in a remote learning environment. This project is supported by positive research and market demand: 1,000 teachers, 500 students, 200 parents expressing interest to attend, and purchase exclusive remote- learning SAM Labs training, webinar, and products since Covid19\.

SAM Labs wants to transform the innovative classroom resources it has built over the past 6 years, used by 1 million students globally, into state-of- the-art resources for remote learning. This ambition requires a deep understanding of learners' needs and situations, teachers' abilities, and government expectations. These needs, abilities, and expectations are not simply academic, they are also social and psychological. In addition to technological features addition, SAM Labs will partner with teachers globally to develop professional development to upskill them accordingly.

The project's key objectives are to deploy a fully tested approach to remote learning, including:

- •Sets of curriculum-aligned remote learning lesson packs for 5-14-year-olds
- •A teacher training and certification programme for upskilling
- •Digital apps that support remote learning, sharing, and grading of Science, Technology, and Coding projects.

The focus will be on developing thoughtful Education resources and technology that works in a remote learning environment. SAM Labs' longstanding codevelopment approach with teachers is vital for the effectiveness of this project and is a competitive advantage uniquely held by SAM Labs.

The SAM Labs approach to teaching is, at its core, innovative. A unique blend of rigorous curriculum-aligned instructional materials, but with an emphasis on experiential and constructivist learning. SAM Labs' approach to up-skilling teachers and continuous support are also unique. The use of blended learning at home, with Internet of Things electronics, video webinars, and a student community is part of our leading edge education offering. Promoting the school community feel online, refraining from feeling like isolated homeschooling, will be groundbreaking.

Further, bringing this pedagogical approach to a mass scale in the remote- learning environment, taking into account students' access to technology and teacher's ability to classroom manage from a distance, is completely unchartered territory. Innovations in classroom management, assignment setting, sharing, and learning will abound but, they can only be effective if they're co-developed with users (students, teachers, parents). At all stages of the design and implementation process, which SAM Labs has done for years.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BRITTON MANUFACTURING LTD	Manufacture and sale of colour coded washable face masks	£49,341	£49,341

Britton Manufacturing Ltd trading as Amy Britton Harris Tweed(r) Accessories is an independent Scottish manufacturer of contemporary Harris Tweed(r) Accessories, created from a love of textiles and design. All products are designed and handmade in Scotland and all are manufactured to the highest quality by our team in Stirling.

'Washable' Range of Facemasks

Development and production of a washable facemask set. A facemask that with a social media campaign will make wearing a face mask socially acceptable.

Sold as a multiple set of colour coded washable facemasks in a variety of sizes for adults or children. These can then be put straight into the washing machine. The colour coding will allow household members to identify their own set.

This is an innovative and environmental solution to a PPE shortage and expected societal change over the coming year as the country moves from lockdown to a new form of business as usual.



Competition Code: 2005_CRD_CO_COVID19_R2

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ORB INNOVATIONS LTD	Feasibility study of the non-invasive and real time unbiased monitoring of homeostasis during self-isolation and beyond	£49,993	£49,992

Smartguard's technology combines reliability with functionality, equipping people with the comprehensive information they need to (in)directly take charge of their well-being. Deteriorations in vitals will be depicted and displayed as feedback in an app, enabling everyone to monitor their health in real-time and non-invasively. People will be given access to significant changes of health indicators such as headaches; weakness, muscular pain, fatigue; temperature, fever; respiratory distress. Caregivers with the right to access this data will be able to intervene at an early stage if necessary in the care of COVID-19 of their patients, preventing aggravation of these cases.

The reliability of the measurements is supported by biomedical expertise integrated in the proprietary AI algorithms.

The objective is to primarily ensure active monitoring of vulnerable people staying at home, including older members of the family living in care homes and self-isolated people that live alone, with advice and support they can trust. On the other end of the spectrum, the Smartguard is meant to support the person with data during the recovery process after discharge from the hospital.

Through the democratisation of health care, facilitated by the capability to routinely track symptomatic patterns specific but not limited to COVID-19 with the Smartguard, individuals are given the means to (in)directly manage their health concerns which in its turn will put less strain on the healthcare system, lower costs, and improve public health overall. The innovative "boil & bite" design of the Smartguard is specifically designed to respond to the current urgent situation, enabling a quick expansion and global scaling.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
CRACK INDUSTRIES LIMITED	Crack Magazine XR	£48,590	£48,590

Bringing audiences together via music in our isolated-but-connected times, Crack Magazine will build and launch a free app designed to bring this innovative music content into the hands and homes of fans. Crack is Europe's biggest independent music magazine with a history of innovation in music content. Whether it's producing 360° live sessions with ambisonic audio, teasing major cover stories with geo-tag treasure hunts, distributing virtual reality headsets across the UK for free, or bringing our pages to life through augmented reality, we are industry leaders in adapting and innovating in the field of music and entertainment.

By pairing musicians with creatives in the world of technology and digital design, the app will be a place for tailored experiences designed specifically to be enjoyed at home. In the same way events like Manchester International Festival and SXSW debut newly commissioned work to physical audiences, our app will be a place for new frontiers in music content with a focus on hologram performances, audiovisual collaborations and virtual interactions between fans and artists. This will be a showcase for new kinds of creativity. Technical approaches will include the use of 3D capture and machine learning to create unique holographic recordings of performing artists. These can be streamed via the web to viewers anywhere in the world, and then integrated into Augmented Reality experiences where viewers at home can bring the experiences into their living room. As well as live performances, we will expand the stories in Crack Magazine's digital version and bring them to life using this technology.

The COVID-19 crisis has shown artists need to find new ways of staying connected with their fans. It's also highlighted shortfalls in the tools available to make their performances aesthetically and visually dynamic. Social media platforms compromise audio quality and are only fit for lo-fi setups, while traditional audio broadcasters limit the scope of creative possibilities.

Our objective is simple; build a space for imaginative performances and forward-thinking creativity powered by new technology. We will use our musical knowledge and relationships with tech companies to create extraordinary experiences with amazing artists and demonstrate how creative and groundbreaking technology will shape the future of music entertainment.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MAESTRANO GROUP PLC	Machine learning enabled remote infrastructure inspection tool using both existing and new imagery	£48,897	£48,897

Infrastructure in the built environment (buildings, roads, rail, energy structures and more) requires inspection regularly, for safety. New technologies such as drones, mobile phone cameras, CCTV and digital cameras mean that there is more and more imaging data of assets available, making it ever increasingly difficult for asset inspectors and managers to store, review and assess captured data. But there is too much data to review and so costly (and at times) physical inspections still occur, and that will be increasingly difficult in a post-pandemic world of restricted movement and both public and private budget constraints.

The key objective for the project is to develop a fully standardised imagery and video data review system to deliver the results in a cloud-based user interface on top of an already developed and powerful ML technology. This is innovative as for the first time it will enable asset managers and inspectors to review very high volumes of inspection data from remote systems such as drones and on-vehicle cameras on an exception basis via ML based automatic recommendation of candidate issues and problems, and from any internet-connected personal computer, in home office or at any location as required.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPTONET LIMITED	Distant Ophthalmic Triage System (DOTS)	£49,485	£49,485

Eye care provision is an essential part of primary health care, which is reflected in the over 13 million national health service (NHS) sight tests performed in England every year.

However, the optical sector has been halted by the Covid-19, and is likely to continue to be severely disrupted for a long time, since social distancing cannot be maintained during routine eye examination. This situation is having a severe economic impact on the sector, but moreover, the suspension of routine primary eye care poses a risk of a large number of eye conditions being left undetected and untreated, some of which may result in permanent visual loss.

NHS England, together with the UK Optical bodies, have stated the need to provide urgent, emergency, or essential primary eye care. It has been advised that, where possible, this service should include remote triage and consultations by telephone or video; taking advantage of technology to minimise face-to-face appointments and patient -- practitioner contact time.

It is thus imperative to devise new approaches to eye health care that can be implemented remotely. Optonet projects the development of a Distant Ophthalmic Triage (DOT) System to assist optometrists (ophthalmic opticians) during remote consultations with individuals who may experience ocular symptoms during the lockdown.

The DOT system is an innovative software that can be accessed online and comprises a thorough set of visual triage questions related to common ocular symptoms. Once patient answers are recorded, the program will suggest a list of likely underlying causes for those symptoms.

In addition, the DOT system will allow the practitioner to display high-quality visual charts remotely on any computer or tablet owned by the patient, in order to collect some essential visual data. This is a unique new initiative.

Optonet's DOTS will also offer safe record keeping in the cloud, using a secure dedicated server. This sorts the problem of safe and organized record keeping (as optometrists may work from home), but it also simplifies access to data, and the exchange of clinical information with other health care professionals.

Optonet's unique innovative approach may help restoring some degree of primary health eye care for the general public, whilst minimizing the risk of Covid-19 transmission. This initiative may also significantly help the optical sector to keep some degree of economic activity during social distancing conditions. It can also be the first step towards the development of a future Tele-Optometry service.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
PORTSMOUTH AVIATION LIMITED	Scientific evaluation and confirmation of PAQUALYTE as a biocide/ disinfectant against COVID 19 to UK standard	£47,000	£47,000

With the COVID 19 pandemic impacting everybody's daily lives, PAQUALYTE is an environmentally friendly, safe and effective biocide/disinfectant solution. The solution is created by the quality-controlled utilisation of salt, water, and electricity, via an electrochemical generator. PAQUALYTE is manufactured by Portsmouth Aviation Ltd.

Through careful and highly controlled electrochemical activation of salt and water, PAQUALYTE's active ingredient is hypochlorous acid (HOCI) which is a weak acid that exhibits high disinfecting properties. HOCI is the same chemical that is produced naturally by white blood cells in all mammals, which is important for the healing process and also for protection against invading pathogens. Hypochlorous acid is a powerful oxidant that is effective against invading bacteria, fungi, and viruses. The unique and controlled electrochemical process that produces HOCI also provides enhanced oxidative reductive potential (+800mV) of the PAQUALYTE solutions. This increases the disinfecting power of PAQUALYTE which means that although PAQUALYTE is 99% water, it is also 99.99% effective against bacteria and viruses.

The PAQUALYTE solution can be fogged, applied directly or sprayed on all surfaces. It contains no alcohol and is therefore not subject to HMRC regulations that govern import and exports of alcohol related products. PAQUALYTE is safe for humans, animals and fauna and can be produced at source, and at scale and distributed requiring little or no plastic. PAQUALYTE is a scientifically proven disinfectant that is effective against bacteria and viruses.

The technology providers, teamed with the University of West England, Bristol (UWE) who are world leading experts in the development and testing of electrochemically activated solutions and their application as effective disinfectants. The key aim of this work is to scientifically demonstrate the safe and effective use of PAQUALYTE for the biological (viruses and bacteria) decontamination of spaces and objects.

By testing to confirm the efficacy of our PAQULAYTE, combined with its safety and eco friendliness, the product could be used to create confidence, not only in the product for general use as a disinfectant and hand sanitiser, but also for use within fogging tunnels, for entry into buildings, malls, stadiums and airports as already deployed in many other countries throughout the world. This product could provide the needed step change for unlimited production, at source, of effective solutions for mass credible biological decontamination.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
OPEN COSMOS LTD.	Satellite testing and satellite operations from home	£50,000	£49,999

The innovation of the solution is intrinsic to the process. Using open-source libraries and cloud services providers we are going to change entirely how the AIT phase of a satellite is run, in all but the Vibration, Electromagnetic and Thermal-vacuum test phases.

With only 1 engineer in the clean-room controlling the power systems, several AIT engineers will perform reference functional tests from each of their homes, and will receive real-time telemetry from the satellite.

Supported by standard business videoconference tools, the remote engineers will coordinate with the onsite staff to trigger specific actions requiring physical access, and will share and evaluate the results of the tests executed from home, gathering all the data in the cloud for later post-processing.

All this will happen in a simultaneous, multi-user access, which is currently not available in the on-site system. This will also bring reliability to the system, since the overall data gathering and processing chain will be performed in virtual machines on the cloud, which can be backed-up and replicated in a matter of minutes, and to which users access by means of end-to-end encrypted internet protocols based on our standard corporate internet credentials, without the need for VPNs.

The same process applies to remote mission operations, which now will feature the possibility of simultaneous multi-user access, enabling the distributed team of mission operators to still receive telemetry and insights of the satellites health status, and to control them, following the assigned rights to each of the users.

This is to be a containerised software image that relays the information to/from the cloud server, and the associated software on the server that allows access and visibility to the data.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
LUDGER LIMITED	GlyHealth-COVID: A precision medicine test to identify ImmunoFrail patients at high risk of becoming severely ill or dying from COVID-19	£49,497	£49,497

This project is to accelerate the development of a proof-of-concept prototype of **GlyHealth-COVID** - a medical technology we are designing to identify **immunofrail**' individuals who are at high risk of becoming severely ill or dying from COVID-19\.

Initially, it was thought that only the elderly would get very sick and die from COVID-19 but around 25% of deaths have been in those aged below 65 with severe sickness and death occurring even in young, apparently fit, individuals. Using current medical technology doctors cannot foresee which of their COVID-19 patients will have the worst health outcomes so they must guess - often with disastrous consequences.

Our work is on early detection and prediction of the health trajectories of patients with chronic and acute inflammatory diseases (IDs). COVID-19 is an acute-ID which causes sickness and death in similar ways to chronic-IDs but at greatly accelerated speeds. Our analysis suggests that the most vulnerable COVID patients are 'immunofrail' individuals whose immune systems are exhausted and go into overdrive - but instead of killing the virus they produce an inflammatory storm that starts killing the person's own body cells.

Immunofrailty is a concept we have developed during over a decade of research. It is a very complex condition with a wide range of causes that all lead to high levels of chronic inflammation. Current medical technology can only measure acute inflammation, not immunofrailty-related chronic inflammation.

We have developed a medical technology called **GlyHealth** that reliably measures immunofrailty and chronic-inflammation in individuals from changes in **biomolecular patterns in their blood**. This can be done without interference from acute inflammation. Those patterns are signals that can predict dangerous inflammatory storms.

GlyHealth-COVID is a streamlined version of a test called GlyHealth-IBD test that we have developed to help gastroenterologists caring for inflammatory bowel disease (IBD) patients. GlyHealth-IBD can reliably predict future inflammatory storms in IBD patients up to 18 months before the storms are powerful enough to cause damage, enabling early proactive treatment of the disease.

This project is for us to take GlyHealth-IBD and adjust it to produce the GlyHealth-COVID prototype. We can then test its ability to identify immunofrail COVID-19 patients in an initial clinical study.

If it performs like GlyHealth-IBD then GlyHealth-COVID would be able to reliably identify vulnerable COVID-19 patients from small (0.2ml) samples of their blood. The samples can be taken with easy-to-use fingerprick blood collection kits which can used at home.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
OBELISK LEGAL SUPPORT SOLUTIONS LIMITED	Remote Working Productivity Tool	£49,270	£47,800

In a few short weeks, COVID19 has upended traditional working patterns, forcing millions of the UK's office staff to work remotely. Simultaneously workers need to balance complex family circumstances due to school closures and other new commitments. Employers likewise face a uniquely challenging business environment, with need to maintain continuity, productivity and cash flow where and however possible.

This project will deliver a remote-working tool that can help diverse businesses manage this change in workforce capacity (both internal and external) and optimise the contribution of those employees that need to work flexible/ad hoc/reduced hours from home. The tool will allow businesses to have an overview of the skills, availability and loading of their workforce, easily allocate work to them, and track the progress and time spent on completion.

By leveraging our existing platform, built originally to manage remote lawyers, and integrating common productivity tools for documents, meeting and time keeping, we aim to deliver a powerful solution to businesses that enables them to distribute work effectively and be at their most productive.

During the lockdown, we have seen the benefits of remote-working such as less pressure on transport systems, less pollution, increased family time and well-being benefits, all of which go toward other sustainability goals for businesses such as addressing the climate change challenge and gives such a remote-working tool longer-term societal benefits.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ADVANCED MANUFACTURING (SHEFFIELD) LIMITED	Secure Supply Through Innovation (SUSTAIN)	£49,657	£49,658

Commercial aviation has been heavily impacted by the Covid-19 pandemic, with significant production disruption combined with decreased demand leading to deferral of aircraft orders. While this will be felt across the industry, SMEs are particularly vulnerable and job losses are expected throughout the sector. To reduce the impact on jobs and market share, AML are proposing a technology development project to help secure both new and existing work supplying critical wear parts for commercial aircraft.

AML currently manufactures and supplies advanced bearing products to an aerospace prime and is on the cusp of securing a further major supply agreement with this customer. These products are wear parts on commercial aircraft engines and require replacing on every repair and overhaul visit for every engine in service. The package that AML currently supplies covers both new and older aircraft, particularly those commonly used for freight aircraft, a key sector in the face of the pandemic.

As these components are split bearings, the existing process involves an initial wire Electrical Discharge Machining (EDM) split operation. The two halves are then glued together and finish machined, leading to increased cycle times and lead times. If the part could be machined as a complete part and then split at the end, this would drastically increase the overall efficiency of the process.

To achieve this, this proposal seeks to develop micro- wire EDM technology for this application. This represents substantial innovation owing to the challenges involved in using such unusually thin wire, on tough, hard materials, to very tight tolerances. Successful implementation will result in reduced lead times, increased efficiency and negation of the risks surrounding glue supply.

The immediate impact expected is the protection of jobs and market share at AML, as well as the safeguarding of the supply of advanced bearings for commercial and freight aircraft. In the medium to long term, the development of such novel techniques for manufacture of these parts will put AML and the UK in a strong position to maintain their standing in the aerospace industry in the aftermath of the pandemic.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Westcountry Fruit Sales Ltd	COMMUNITY FOOD DELIVERY tech innovation enabling SAME DAY home delivery of groceries to isolated consumers	£49,567	£49,567

The Coronavirus crisis has highlighted a fundamental failure of the existing retail food distribution model in the UK, i.e. that the Supermarkets have surprisingly limited capability (in total household %) in providing easy and immediate access to home delivered food/groceries to the thousands of households who find it difficult, if not impossible, to make a physical visit to a supermarket or any other general grocery store. This project is a business innovation that marries both new and existing technologies and infrastructure in such a way that will enable us to mobilise the significant non-supermarket, regional food wholesale businesses to provide a more customer-focussed grocery delivery service. Our innovation will guarantee NEXT-DAY (pre-order) or SAME-DAY (speculative van stock sale) home-delivered groceries to isolated households/consumers. The market failure that we seek to address has been painfully and distressingly highlighted by the weeks-long wait for supermarket delivery slots in every region of the UK during the Coronavirus crisis.We operate a market-leading wholesale fresh foods business in the far SW of England. We understand food trading and logistics. We can demonstrate that our idea, with the right amount of focused investment, would be quick to prove itself commercially viable.

We aim to provide the isolated and immobile/vulnerable consumers whose access is constrained by age, infirmity and/or geography with a business solution that imitates and improves upon the old-school 'knock on the door' type of community door-to-door 'monger van sales operations that were the norm 40+ years ago.

Households that sign-up (nil-cost) to have the 'shop come to them' would receive text notifications of the arrival of the grocery van in their area on the scheduled day(s) of the week. All the customer has to do is click 'confirm' to the text.. and the 'grocer-driver' would schedule in a visit to the customer's property in the course of completing his round/route, to enable the customer to buy their assorted groceries. The entire transaction would take place without any direct contact or even close interaction between the driver and the householder. This innovative solution utilises technology to ensure that 'social distancing' requirements are respected.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DANECCA LIMITED	Battery Management System (BMS) for Electric Vertical Take Off & Landing (eVTOL) Aircraft & Low Cost All-Electric Aircraft (AEA) - Initial Scoping & Feasibility Study	£49,973	£49,973

All Electric Aircraft (AEA) have the potential to reduce overall aerospace emissions and provide new commercial operating models for the benefit of the consumer, business and environment. However, as it stands there is a block to this technology in the form of commercially available BMS systems for these type of aircraft. As it stands, Electric Vertical Take Off & Landing (eVTOL) craft currently lead the charge in relation to commercially viable products and services.

COVID-19 has affected the aerospace industry significantly harder than other industries, both from supply and demand side, typically in such scenarios we see alternative and disruptive technologies come to the forefront. However, there are significant barriers to the development of commercial options for AEA products, mainly in the form of an easily accessible supply chain for key commodities.

Currently, there are no off-shelf BMS solutions for eVTOL, and large Aerospace suppliers are not in a position provide such system within a 3 year timescale, and even then, the standards & legislation for eVTOL & AEA have not been fully developed.

eVTOL & BMS systems are a gateway technology to allow a variety of other EAerospace Products, Danecca's aim would be to focus on low cost aircraft that typically would operate using piston engines While looking to develop a modular system that would allow us to expand into the requirements for core Aerospace BMS for commercial aviation, if the legislation that develops is closely aligned to existing commercial aerospace requirements.

The BMS system will be designed to be scalable and therefore appropriate to a number of industries including automotive and energy storage as required. As no standards exist for eVTOLs, a flexible approach will be taken, allowing elements of both Automotive ISO 26262 & Aerospace Functional Safety elements to co-exist within the same novel design.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
DARK HORSE TECHNOLOGIES LTD	The future of crop intelligence - Remote sensing crop-loss diagnosis	£49,950	£49,950

Dark Horse Technologies (DHT) is built to solve 'Sustainable Development Goal 2: Zero Hunger', is the future of precision crop intelligence and we are solving the single greatest challenge to agricultural security, the early detection, diagnosis and targeted intervention of crop-loss events.

Farmers lose 30% of cereal yield each year due to crop-loss events such as diseases, pests and weeds.

DHT already uses satellite data to monitor field health before recommending drone missions to capture hi-res images from which our proprietary crop model accurately predicts cereal yield and maps crop density.

This project will build on our proprietary crop model to also use the drone images to diagnose specific causes of crop-loss in wheat (as in which specific disease or weed a crop is suffering from).

A world first technology.

The productivity benefit to farmers is three-fold:

1) Increased yield through the early detection, accurate diagnosis and intervention in crop-loss events.

2) Lower cost per tonne to produce: The model can map all crop-loss events in a field, the output file integrates with existing farm machinery to target solutions on a plant-by-plant basis. Early-and-targeted intervention decreases the total amount of chemical required to 'intervene', decreasing total costs whilst also benefiting the environment and health of consumers.

3) The cultivation of crops typically means the near-universal application of harmful chemicals. DHT will enable the early and precision-targeting intervention in crop-loss events, meaning considerably less chemical would be required to treat an issue than is currently the case.

The introduction of this technology could not come at a more critical moment, it is a time of global uncertainty and supply chain stress brought on by COVID-19\. At present, the UK is a net cereal importer and many countries are considering banning or restricting exports in-order to ensure domestic supply (e.g. Ukraine - Taras Vysotskiy speaking to Reuters 15 April 2020). Combined with Brexit, this threatens the UK's supply of cereals for both people and livestock. The combination of 'greater yield at lower cost/tonne' will boost the UK's cereal farming productivity by as much as 30%, helping to protect the UK's domestic supply of cereal grains and making the UK a net cereal grain exporter.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
MANTRAH LIMITED	Natural Language Processing based Knowledge Base and Chatbot for People with Dementia and Caregivers	£49,817	£49,817

While the awareness of the challenges and complications of Dementias has vastly improved over the recent past yet the inherent complexities of the condition leave the person with dementia and their caregiver often struggling to get real-time answers to their questions when they need it, without needing an appointment to meet their healthcare professional or picking up the phone to talk to a helpline only available between 8am-5pm. Internet or Google searches produce a large amount of information that is not curated and needing the users to interpret the information on their own.

At Mantrah, we are building a digitally accessible and one of the most comprehensive Dementia knowledge bases with the richness and accuracy to address everything from common (mundane) to nuanced (and complicated) questions that people with dementia and their caregivers often have as they struggle to manage the condition. This knowledge base, accessed through an easy-to-use chatbot, will provide quality, curated and timely information - helping those with Dementia and their caregivers reduce stress and burden.

The solution will support voice-based conversations and integrated with Mantrah, our dementia care management application, will be able to provide highly personalised and contextual responses to user queries.

Our knowledge base and chatbot solution is unique in providing sophisticated yet easy to use tools for the elderly and their families. By empowering families with timely information costs of dementia care can be reduced. Healthcare professionals including caregivers can use the knowledge base and chatbot solution within their practice environment to support queries from their patients and families.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BRONZE SOFTWARE LABS LTD	The Tribe Project: COVID-19	£49,914	£49,914

Our proposal is centred on a digital approach to facilitate the scaling of 'trusted' community groups which are responding to COVID-19 community demand. Our focus will be to provide a solution to facilitate coordination, planning and action of broad spectrum community need between voluntary organisations and local government.

We will be repurposing a Smart Cities base technologies to geospatially orientate, categorise and ultimately predict the movement of community 'need' across society through use of machine learning. We will grow and position community resources directly proportional to projected emerging community demand.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
ARTS, CULTURE & HERITAGE ADVENTURES CIC	Unforgettable Experiences	£49,992	£49,992

Unforgettable Experiences provide interactive, creative sessions and practical support for older people and their carers. Our qualified and experienced Creative Facilitators develop personalised care plans and work with you in small groups to help you to get online so you can discover your love of arts, cultural and heritage activities and events. We will help you to improve your emotional wellbeing, keep your mind active, stay connected with your loved ones, make new friendships and meet like-minded people who share similar interests to help you to learn new skills, retain your independence and improve your quality of life.



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Participant organisation names	Project title	Proposed project costs	Proposed project grant
BEONHAND LIMITED	onHand - uber for volunteering	£49,976	£49,976

onHand's mission is to create an uber or Airbnb for volunteering on a national scale - making it easier for vetted volunteers to give help, while making it quicker and cheaper for people to receive help.

Launched in 2018, onHand matches vetted volunteers with older adults and vulnerable people (including those self-isolating) who need help with simple tasks such as shopping, medicine collection/drop offs, urgent errands and other essentials. By tapping into the sharing economy we can address one of society's most pressing issues, at a fraction of the cost of today's solutions, and when NHS resources are most strained.

onHand is already operating successfully in London with positive feedback from both volunteers and older people who have used the service and app. Given this new investment, onHand will be able to launch into new locations starting with Newcastle, in partnership with the National Innovation Centre for Ageing, and with a view to becoming a national service before the end of the year.

We have an ageing population, where 24% will be age 65 or over by 2035\. Over half of all people aged 75 and over live alone, and startling research shows that levels of loneliness are increasing. No one should have no one, and onHand helps combat the loneliness epidemic for both older and younger generations.

In this time where we have all been told to protect the NHS, on Hand does just that - volunteers provide care before professional and national services need to be drafted in.

As an innovative yet small team, onHand needs investment to scale and help more people. We want to invest in our technology, and launch a pilot scheme outside of London in Newcastle, with a view to replicate our successes across the UK. This development will take us from helping 100's of vulnerable older adults to enabling help for 10's of 1000's.

In a post COVID-19 world, we hope that onHand can resume providing a larger variety of tasks for older people who need help, including closer contact and in-home support such as light gardening and simple tasks around the house (like changing lightbulbs and taking the bins out) plus basic companionship, all with a network of new volunteers who continue to give their time even after COVID-19\. These are the types of services we successfully provided prior to the current crisis, delivering 1000's of hours of help in the last year.



Competition Code: 2005_CRD_CO_COVID19_R2

Total available funding is £40,000,000 rounds 1 and 2. £7,000,000 for this round

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

Participant organisation names	Project title	Proposed project costs	Proposed project grant
ACADEMY OF ROBOTICS LIMITED	No Human Contact Deliveries Via Semi- Autonomous Vehicles	£49,880	£49,881

Our project proposal aims to perform semi-autonomous last-mile delivery in which medicines can be delivered from the pharmacy to care homes without human contact, simultaneously laying the groundwork for future autonomous delivery. This project will be run by the Academy of Robotics Ltd and in partnership with Eurovia UK Ltd.

Over the last four years, the Academy of Robotics Ltd has been working on a way to automate last-mile delivery and as a result, we built Kar-go. Kar-go is an electric autonomous last-mile delivery vehicle able to pick up a package and then take it to any target address. In summer 2019, we unveiled Kar-go, the first of its kind, UK-made, self-driving electric vehicle. Able to compete with US-owned systems such as Starship, Google, and Tesla's autonomous systems, the difference with Kar-go is that it was designed specifically for last-mile delivery in residential areas in the UK.

Up until Jan 2020, we had reached the stage of planning our first series of live trials in 2020 with a couple of corporate partners until COVID struck and temporarily halted everything. We aim to use this cutting edge technology to help in one of the hardest-hit areas being care homes. The operational capabilities of essential services and ensuring their maintenance is vital. Not just during the COVID pandemic but for all future potential pandemics and scenarios that require proactive mitigation solutions. As such, ensuring that they can remain active in situations requires an innovative solution to supply chains and the delivery industry that this project intends to provide.Prescription and medical delivery is our focal delivery type for this project. Beyond this project, however, once no-human-contact is demonstrated as a viable delivery method. There is a grand scope for further application to alternative essential services and a constantly expanding digital infrastructure to support the foundation of semi-autonomous and full autonomous last-mile delivery.