

EIT COMMUNITY INNOVATIONS TACKLING THE COVID-19 CRISIS

The **European Institute for Innovation and Technology (EIT)** is proud to present a selection of innovation projects and ventures awarded through the EIT's Crisis Response Initiative. This is a EUR 60 million fund mobilised by the EIT for European ventures and new innovation projects at the forefront of COVID-19 solutions and responses. The EIT Crisis Response Initiative is directly contributing to the European Union's response to the COVID-19 pandemic.

The EIT Crisis Response Initiative consists of two streams: **'Venture Support Instrument'** offering critical support for start-ups, scale-ups and SMEs to weather the crisis and accelerate their post crisis growth; and the **'Pandemic Response Projects'** funding new and relevant innovation projects to tackle the wide array of challenges ushered in by the pandemic.

Click to discover a selection of EIT Crisis Response Initiative solutions powered by:



All innovation projects and ventures supported by the EIT Crisis Response Initiative can be found here:
<https://eit.europa.eu/our-activities/covid-19-response/solutions>.



EIT CRISIS RESPONSE INITIATIVE

INNOVATIONS BY EIT CLIMATE-KIC

VULTUS AB (SE) - EIT Crisis Response Initiative Budget: EUR 500 000

Innovation: Vultus eliminates waste in farming by offering satellite-based prescriptions, reducing nitrogen, fungicide and water usage by 30%. Vultus services can be connected with other applications which means farmers get access to the tools through the products they are already using.

Expected Results: An impact study found that Vultus technologies can reduce nitrogen application amounts by as much as 40%, while subsequently reducing nitrous oxide emissions. Vultus helps with key environmental problems stemming from agriculture production, specifically leaching of nitrates, emissions of ammonium, depletion of ground water reservoirs and pollution from excessive fungicide usage. The technology also contributes to restore and support a strong diverse ecosystem and help reduce agricultural land use, enabling further restoration efforts.

1000 Solar Roofs – Cities and Jobs Regeneration through Community Led Solarisation

(SOL4ALL) - EIT Crisis Response Initiative Budget: EUR 100 000

Partners: Zelena Enerhetska Zadruga (HR), and E-insitute Zavod za celovite razvojne rešitve (HR).

Innovation: The aim of the “SOL4ALL” project is to accelerate the transformation and regeneration of cities in Croatia through a community-led solar revolution by delivering 1,000 solar PV systems to urban households. The project will focus on development of an online matchmaking platform that will engage citizens and cities with project developers, solar companies and solar installers to activate behavioural change, jobs and skills creation.

Expected Results: The project will tackle unemployment and economic recovery caused by the COVID-19 crisis in Croatia and Slovenia by designing and delivering models for green recovery through solar energy and green jobs. This could then be further replicated in the South East Europe Region. Solar energy will be delivered in 10 cities who have already committed to the climate and energy transition. The project will save energy costs in households, bring new skills and jobs through solar cooperative model, enable faster energy transition in cities while creating more resilient communities.



Smart tools & services to speed up a circular, transparent and regional textiles economy in

Europe (Speedboat-C project) - EIT Crisis Response Initiative Budget: EUR 333 800

Partners: European Technology Platform for The Future of Textiles and Clothing (BE), Lucidminds AI (NL), Circular.Fashion Ug (DE), Sourcebook GmbH (DE),



Innovation: The Speedboat-C project ‘s ambition is to contribute to the emergence of a circular, resilient and regional textile industry in Europe. It develops a one-stop-platform for circular clothing design and production. The platform provides automated recommendations for fashion brands and manufacturers. The matchmaking process favours options that advance circularity, increase transparency, and reduce carbon emissions by establishing regional value chains in Europe.

Expected Results: By facilitating demand and supply on its platform, the project partners envision that European circular value chains will create jobs and foster an economy that is in line with its climate-neutral targets.

EIT CRISIS RESPONSE INITIATIVE

INNOVATIONS BY EIT DIGITAL

#GoSAFE: mobility across the world being safe - EIT Crisis Response Initiative Budget: EUR 465 829

Partners: Engineering (IT), HOP Ubiquitous (ES), Datacon (NL), Degetel (FR), Microlan (NL), Chino.io (IT)

Innovation: The aim of #GoSAFE is to establish an interoperability model to enable cross border mobility during COVID-19 crisis, based on: (1) Solid national back offices providing information on people infected and (2) the GoSAFE BioSurveillance Kit BSK. The #GoSafe passport is a token or a tag (that can be physical or virtual). Once the user will log in to a generic system of a mobility operator, he/she will ask both for the ticket and at the same time for the virtual token for the assessment of his/her health status with respect to COVID-19. No other data of any other people will be requested from the application.

Expected Results: GoSAFE's main goal is to create the conditions and the standards for an EU free COVID-19 passport, in other words a, 'GoSafe passport' that gives the holder the right to travel safely among different countries. The approach is totally privacy-preserving.

Team Discover - Patient monitoring system- EIT Crisis Response Initiative Budget: EUR 325 000

Partners: ELTE-Soft (HU), InnoTractor (NL), Mohanet (HU)

Innovation: A full-fledged solution that monitors patient, who are under non-intensive care. A prototype will be designed of a device that can measure the patient's vital signs semi-automatically and for which production can be easily scaled and improved by using 3D printing. Patients' data is uploaded to a central server, then presented to medical staff in the form of a dashboard, where they can receive alerts and analysis. The system would enable the monitoring of many patients at the same time and ensure that deteriorating cases are dealt with immediately.



Expected Results: The potential loom of a second wave of COVID-19 infections in the coming months coupled with the need of decongesting care institutions strongly point to the need of reliable and affordable remote monitoring systems. Furthermore, this activity would support the current trend of digitalisation in healthcare and wellbeing, allowing an affordable solution to monitor and easily collect data and analyses.

SARA BV (NL) - EIT Crisis Response Initiative Budget: EUR 400 000



Innovation: SARA is a smart healthcare robot that provides three main functionalities: (1) Improving quality of life through stimulating caretakers' mind and body and providing relaxation, (2) Decreasing workload of caretakers by taking over mundane tasks to allow caregivers to spend their time where it matters most, (3) Help contain COVID-19 disease by assisting with existing and new tasks that would otherwise extra precious human resources.

Expected Results: SARA Robots have already been deployed to support several COVID-19 infected people by setting up connections to their family. With the received support, SARA plans to add several functionalities to SARA Robots to address challenges brought by COVID-19. Furthermore, the robot will support early disease detection.

EIT CRISIS RESPONSE INITIATIVE

INNOVATIONS BY EIT FOOD

NapiFeryn (PL) - EIT Crisis Response Initiative Budget: EUR: 466 200

Innovation: NapiFeryn extracts protein from rapeseed oil production waste streams, providing a sustainable alternative to animal-derived proteins. The protein is as nutritional as plant-based market leader soy, creating a product that is more sustainable and affordable for consumers.



Expected Results: NapiFeryn has the potential to transform the protein market by reducing food insecurity and increasing plant-based eating habits of consumers around the world. The investment provided by the COVID-19 Bridge Fund will help to execute its ongoing research and development activities, leading to commercialisation of novel, plant-based, functional food ingredients derived from rapeseed.

Antoféno! (FR) - EIT Crisis Response Initiative Budget: EUR 476 300

Innovation: Antoféno! is a French biotechnology company dedicated to the development of a sustainable and healthy replacement for chemical preservatives on fruit and vegetables, which are used to extend shelf life and preserve quality.



Expected Results: The benefit of this technology is twofold. Antoféno! replaces molecules which could be harmful for the environment and health, whilst also recycling waste by transforming it into a product that can be used by the agricultural sector. The bridge funding from EIT Food will enable the company to enhance their product portfolio and help them to work towards a vision of a circular economy model.

COVID19 BEAMitup (Diagnostic test SARS-CoV-2 and surrogate biological standard for sanitization validation) -EIT Crisis Response Initiative Budget: EUR 792 208

Partners: SwissDeCode (CH), University of Helsinki (FI), IATA CSIC (ES), Microbion (IT), Eurofins (FR)

Innovation: Project BEAMitup aims at providing a tool to evaluate hygiene in food-related environments, by validating if a rapid test used for bacteria can be adapted to the detection of viruses on surfaces. For this a platform will be developed to help food companies to quickly detect the presence of Coronavirus on food processing surfaces.

Expected Results: A Consortium consisting of research, academia and the industry from five European countries, plans to develop a platform in the form of an automated testing device which will be installed directly at food processing facilities, providing results in less than one hour with no need for complex instrumentation or specialized personnel. The flexibility of this technology allows the incorporation of a varied group of tests within the food industry, including other emerging viruses. This simple, fast and inexpensive test kit could well be used in the industry as well as at e.g. artisanal level.

EIT CRISIS RESPONSE INITIATIVE

INNOVATIONS BY EIT HEALTH

Digital Control Centre for COVID-19 - EIT Crisis Response Initiative Budget: EUR 553 750

Partners: Hospital Clínic de Barcelona (ES), Erasmus University Medical Center Rotterdam (NL), Fundació Clínic per a la Recerca Biomèdica (ES), Institut Català de la Salut (ES), Katholieke Universiteit Leuven (BE), Fundació Institut d'Investigació en Ciències de la Salut Germans Trias i Pujol (ES), Fundació Docència i Recerca Mutua de Terrassa (ES)

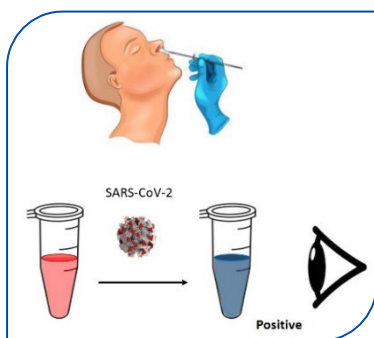
Innovation: A virtual control centre for patients who have tested positive for COVID-19 that will be under the supervision of an expert infectious disease specialist. Expert can independently assess, validate, or augment the patient treatment plan to support optimal outcomes and target most seriously ill patients to be prioritised for specialist supervision. Acquired learnings about different patient needs will inform an artificial intelligence algorithm to provide predictions for patients who are likely to experience the worst outcomes.



Expected Results: The project has already demonstrated positive impact with a study published in *Clinical Infectious Diseases* demonstrating a 50% reduction in mortality rate.

PlasmonDetect - EIT Crisis Response Initiative Budget: EUR 496 012

Partners: Technical University of Denmark (DK), PentaBase (DK), Copenhagen University Hospital (DK), Bispebjerg and Frederiksberg (DK), Hvidovre Hospital (DK)



Innovation: To overcome the drawbacks of the current standard for testing, PlasmonDetect proposes a novel molecular diagnostic technology called "plasmonic strand-displacement amplification assay" for rapid detection of COVID-19. This technology unites several disciplines and harnesses scientific advances in molecular biology and nanotechnology.

Expected Results: The ability to diagnose COVID-19 with a rapid, cost-effective method, in a variety of settings, will allow for a significant increase in testing, leading to an improvement in society's response to the pandemic

Neurent Medical (IE) - EIT Crisis Response Initiative Budget: EUR 500 000

Innovation: The development of a novel therapy to treat rhinitis, a nasal inflammatory disease that affects 40% of the global population. Currently, treatment is limited to over-the-counter (OTC) products and an invasive surgery. The NEUROMARK™ System is instead designed to treat rhinitis through targeted, localised, multipoint application of RF energy in the nasal cavity. Due to COVID-19, without the Start-up Rescue Instrument funding, Neurent would not be able to continue the most time critical activities, maintaining the original timelines for their clinical study to build their evidence base.

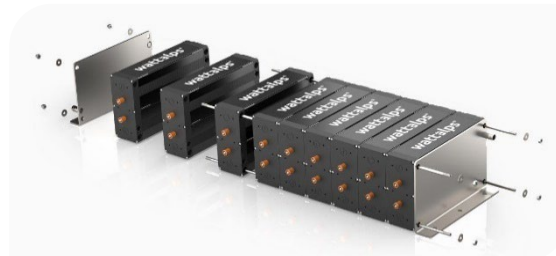
Expected Results: To establish the NEUROMARK™ system as the go-to therapy for patients that are eligible for surgical intervention, which can then be expanded to treat other inflammatory chronic conditions in the long-term.

EIT CRISIS RESPONSE INITIATIVE

INNOVATIONS BY EIT INNOENERGY

WattAlps (FR) - EIT Crisis Response Initiative Budget: EUR: 250 000

Innovation: Affordable high-performance batteries for the industrial vehicle market (construction, material handling and agriculture). WattAlps batteries offer full power in any conditions, full range covered by the same technology, full service with a set of tools to optimize life and productivity and lasts a full day without charging.



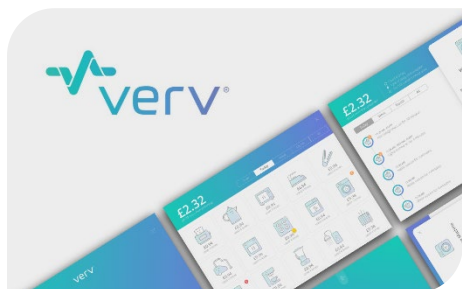
Expected Results: WattAlps offers high performance and modular batteries specifically adapted to industrial vehicle market. For a cleaner and more pleasant city, WattAlps batteries will replace the diesel engine by a clean power solution in construction and material handling equipment. CRISIS Response Instrument support will enable the replacement of suppliers allowing the venture to develop and produce the batteries, mitigating the COVID-19 disturbance in their supply chain. The venture will preserve staff, continue production, and protect the cashflow health.

Amp Net (HR) - EIT Crisis Response Initiative Budget: EUR: 350 000

Innovation: AMPnet Crowd investment platform enables any energy community to run crowdfunding campaigns under their own brand. After a project has been funded, AMPnet oversees that all the investors receive their money when the project makes money.

Expected Results: InnoEnergy's CRISIS Response Instrument support enables the venture to mitigate the COVID-19 heavy impact on their operations (delayed expected financing round; a significantly reduced monthly burn rate w/ 35%, cutting office space and office costs - 80% decrease; no new hires and 30% salary reduction) and focus on further developing the crowdfunding application to its completion and create a decentralized electricity exchange; develop the initial stage of an app for connecting the energy communities with electricity traders and to finalize the compliance for the trading platform, as well as gather 7-10 paying customers.

Green Running (Verv) (UK, NL) - EIT Crisis Response Initiative Budget: EUR 500 000



Innovation: Green Running is a team of Data Scientists and Machine Learning experts specialising in high-frequency disaggregation and data analytics in the energy sector. They are specialised in state-of-the-art predictive maintenance technology for the next generation of smart, sustainable appliances.

Expected Results: The company will continue piloting to secure the first operational platform for their customers, avoiding the COVID-19 inherent disturbance in their value chain.

EIT CRISIS RESPONSE INITIATIVE

INNOVATIONS BY EIT MANUFACTURING

CleanAIR - EIT Crisis Response Initiative Budget: EUR 335 600

Partners: Institute for Production Engineering and Photonic Technologies at the Technical University of Vienna (AT), together with an Austrian and German consortium, including the Austrian Institute of Technology, HPM GmbH, AQA GmbH, TBB BAUER&BAUER GmbH.



Innovation: CleanAIR upgrades the functionality of older air-conditioning (AC) systems, allowing them to both clean the air and disinfect surfaces in a building. A supplemental smart control allows users to choose between a range of cleaning and disinfection strategies. For instance, this smart AC can run on cleaning mode during the day and a disinfectant mode at night, and then removing any overrun during an additional air-cleaning cycle.

Expected Results: Airborne droplets that we expel when we breathe, talk, cough or sneeze are a key transmission route of the SARS-CoV-2 virus, as well as other infectious diseases. However, older air-conditioning systems are generally not designed to clean the air in any way. By upgrading the functionality of older AC-systems to both clean the air inside a building and safely disinfect surfaces, CleanAIR is designed to make indoor environments safer and greatly reduce the transmission of infectious diseases such as COVID-19.

INFOTECH - (SK, PL, CZ) - EIT Crisis Response Initiative Budget: EUR 400 000

Innovation: Infotech addresses manufacturing digitalisation, building data acquisition and analysis capabilities to support smart decision making. With its Digital Twin solution, a virtual real-time 3D replica of physical assets, Infotech provides a digital overview of the positions and flows of people and machinery allowing users to make faster and more accurate decisions about the production and distribution of goods

Expected Results: The 3D Digital Twin allows for better planning and maintenance of stock, people, machinery, while aiding the adoption of new technologies and introduction of new products. Infotech and EIT Manufacturing are joining forces to speed up the digital transformation of manufacturing facilities, projecting Infotech as a Manufacturing Digital Twin champion in Europe and beyond.

INNOV-Ventilator- EIT Crisis Response Initiative Budget: EUR 329 400

Partners: Tecnia (ES) and a German consortium consisting of TU Graz, Carl Reiner, WILD, University Hospital of Cologne from Germany and Osakidetza and Biocruces Bizkaia Health Institute, Spain.



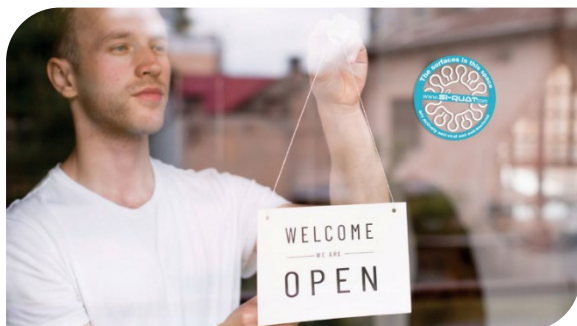
Innovation: INNOV-ventilator is a purely pneumatic (air-powered) ventilator. It is simple and safe to operate using existing equipment and is also much easier to manufacture than a traditional ventilator. The INNOV-Ventilator functionalities are easily upgraded into commonly used sensors and display technologies.

Expected Results: The outbreak of COVID-19 has left many health-systems struggling, due to a shortage of key medical equipment, including ventilators. The global shortage of ventilators has even meant that many patients have been denied critical care. The accelerated the advancement of the air-powered INNOV-VENTILATOR, which is simple to use and manufacture, can help ensure broader access to life-saving ventilators around the world.

EIT CRISIS RESPONSE INITIATIVE

INNOVATIONS BY EIT RAW MATERIALS

Si-Quat by AFFIX Labs (FI) - EIT Crisis Response Initiative Budget: EUR 200 000



Innovation: Si-Quat is an anti-viral clear coat developed to kill viruses including the pathogen of COVID-19. The coating is able to resist thousands of touches and creates an active layer that is self-sanitizing within minutes.

Expected Results: Si-Quat active coating has been developed and tested in the lab. In the coming months Si-Quat will be field tested and rolled out commercially. The

greater goal of the product is to help communities re-open and make people feel more confident going out working, shopping and dining.

FLAXTHOR (DE) - EIT Crisis Response Initiative Budget: EUR 200 000

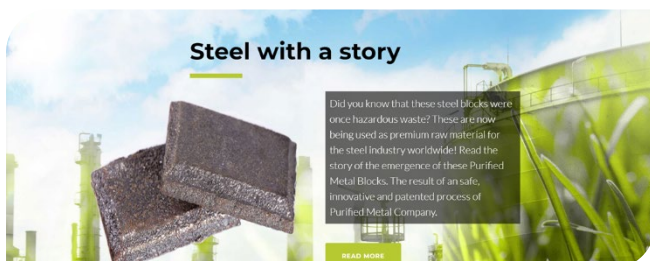
Innovation: An innovative process combining a pure and cost-effective separation of different glass grades as well as valuable metals and responsible environmental protection. In a dry process, the components of photovoltaic modules are separated layer by layer utilizing high-intensity at low-energy light pulses and feed back into production without detours.



Expected Results: complete energy container, installation of process chamber, proven process works on large areas, construction test and adjustment.

Purified Metal Company (NL) - EIT Crisis Response Initiative Budget: EUR 200 000

Innovation: Purified Metal Company developed an innovative and patented process to recycle steel scrap contaminated with asbestos and other toxic substances (e.g. chromium 6, mercury, PCBs, lead and cadmium). The end product (Purified Metal Blocks™ or PMBs) will be sold to steel factories and foundries. The PMBs have unique properties, namely the product is clean, has a high density and has a known chemical specification which is of great value to the customers. The customers of PMC are steel factories and foundries in Europe.



Expected Results: Covid-19 has caused a delay of the start of operation of PMC from the middle of July to the middle of August 2020. PMC has resumed its activities in summer and is planning the opening of the facility by autumn 2020.

EIT CRISIS RESPONSE INITIATIVE

INNOVATIONS BY EIT URBAN MOBILITY

Safely Connected - EIT Crisis Response Initiative Budget: EUR 618 000

Partners: Politecnico de Milano (IT); Fondazione Politecnico de Milano (IT); City of Saint Germain-En-Laye (FR); Cap SGL (FR)

Innovation: To facilitate spatial distancing requirements, the entire downtown of Saint Germain-en-Laye (SGL) will be closed to motorised traffic and its streets used for shops, cafes, restaurants and cultural events. A series of flexible physical and digital tools (an e-commerce platform) will be developed to allow the safe resumption of economy and urban life and to generate a shift towards sustainable modes of travel.



Expected Results: This project will approximate local businesses to local communities. The proximity will lead to a more sustainable model of a 15 minutes cities in which all the necessary goods are at a walking reach.

Inclusive-Ebike - EIT Crisis Response Initiative Budget: EUR 699 225

Partners: Tecanlia (ES); Bosch VHIT (IT); Bilbao City Hall; Modena Energy and Sustainable Development Agency (IT); Nova (IT); One Less Van (IT); Municipality of Bergamo (IT).



Innovation: Inclusiv-Ebike will develop and demonstrate a new concept of rickshaw e-bikes capable of promoting safety and comfort by extending inclusiveness to fragile and vulnerable who have experienced decreased mobility. Inclusiv-Ebike promotes a new era of personalised transport capable of promoting inclusion and assuring social distancing, transport sustainability and healthy aging.

Expected Results: Inclusiv-Ebike will improve safety, comfort and accessibility. It will also contribute to the increase use of eBikes within cities, directly affecting the wellbeing of individuals and at the same time assuring social distancing measures.

RAPID - RAPid Prototyping In 3D - EIT Crisis Response Initiative Budget: EUR 291 113

Partners: University College of London (UK); Fraunhofer Society for the Advancement of Applied research (DE); City of Copenhagen (DK); Municipality of Sabadell (ES); Studio Profondo (IT); Pixel Mill (UK).

Innovation: Improving the delivery of COVID-19 interventions in the built environment, such as cycling or walking schemes. RAPID will use rapid prototyping in 3D to support city decision-making and citizen engagement around changes and interventions to the built environment in response to COVID-19 mobility restrictions, de-escalation phases and social distancing.

Expected Results: Rapid will result in more informed decision-making and more engaged citizens leading to greater acceptance of new ways of moving around a city through participatory redesign of public spaces. Engaging citizens in these decisions is more likely to get their support than simply imposing new approaches. Whilst the focus of RAPID is the response to the current COVID-19 crisis, it will have value beyond as cities explore new urban designs in response to changing behaviours.