

EIT RawMaterials Booster in response to the COVID-19 crisis grants EUR 9.8 million to support 68 innovators

Timing: 1 April - 31 December 2020

3AWater, Finland

Funding: € 99 500

3awater.com

The funding from the COVID-19 Booster will accelerate the product development to get the company back on the track to the product launch at mid-2021, despite the problems created by the COVID-19 crisis. This is done by outsourcing the parts of the product development and design, where team's special knowledge is not needed, but another type expertise will be beneficial.

The project will also aim at customer acquisition by accelerating piloting, which was delayed because of the COVID-19. This is crucial for securing future funding for the company that is needed before the company will be profitable. COVID-19 crisis has impacted on our company actions through production problems, delaying pilot schedules and creating risk for financing the activities of 2021. The consumable production is performed in premises of University of Eastern Finland, which was shut down due to the COVID-19 from period between March to May. Therefore, three months of product development time was lost during this shut down. The pilots with the customers were also delayed the same time due to gathering restrictions. The overall economic situation is also seen as risky and our investors have postponed their next funding round.

about, Germany

Funding: € 200 000

about.de

about GmbH intends to open up a new business vertical targeting small operation, by intensely promoting a simplified plug & play version of the process recognition sensors, together with the basic functionalities of the recognition and analysis service. The immediate impact of the COVID-19 crisis on our activity was a decrease in revenues and less appetite towards new projects from our customers and industrial partners, due to the economic contraction and strict focus on immediate operational needs. More specifically, we expect the planned revenues for 2020 of EUR 920 000, generated mainly by mid-sized operations (as presented to EIT RawMaterials in February, during the RawMaterials Accelerator Phase 2 meeting in Delft) to materialize only to 55 %, as some of our customers have postponed the beginning of our joint projects and other potential customers have refused a collaboration during this period due to lack of resources.

We plan to counteract the negative impact of the COVID-19 pandemic by capitalizing on its positive effect: the acceleration of the digitalization and automation trends. We believe now is a good time for stimulating the adoption of innovative technologies by focusing on our commercialization and marketing strategy.

In terms of customer acquisition, opening up this business vertical – simplified product & services for small mining operations – has several advantages and a high potential for our business, such as widened market awareness on company and products, large pool of potential customers, market segment with low competition, lower efforts through standardized products and customer relationship management, lower and distributed risk on customer portfolio.

In terms of navigating the crisis, the project will contribute to safeguarding the jobs of our mining team (4 FTE), to maintaining innovation, and on the longer run to creating new jobs (double the entire about team by 2024).

With time, the benefits that our target customers operating small mines will experience – the means to improve performance based on real time information on their operation, a solution targeting their particular needs at a convenient price, low effort and fast results (suitable for testing before engaging in a long term collaboration), compliant with the new health and safety regulations, travel restrictions and physical distancing (easy and quick to implement, no on-site service required, no operator interaction needed) - will build trust and enable now collaborations.

Aerial Insights, Spain

Funding: € 200 000

aerial-insights.co

Create a mining-specific version of our topographical tools. This involves releasing an enhanced SaaS platform, designing a computing appliance that will be deployed to the customer premises and tested on the field for three months. Finally, kick-off first sales of both products. Sales have plummeted and are slowly recovering. It is not clear when we will recover pre-COVID-19 levels.

We were doing good progress with a funding round that after the pandemic has unknown outcomes. In general, our cash flow is severely compromised.

AFFIX Labs, Finland

Funding: € 200 000

affixlabs.com

Boost development of Si-Quat anti-COVID-19 coatings for epidemic prevention:

- TRL 6 -> TRL 8
- CRL 6 -> CRL 7

The proposed project is capable to directly contribute to mitigating challenges connected to the COVID-19 global emergency. The company, AFFIX Labs Oy, was founded to fight against the Corona viruses and other pathogens. When the COVID-19 crisis hit China in early January the team behind AFFIX Labs knew that they had to investigate embedding an active substance into the platform that would kill the Sars-Cov-2 pathogens. Five months later the coating is tested and proven and ready to be applied. Many agencies (WHO, EPA, etc.) around the globe have accepted silane quaternary ammonium to be effective against Sars-Cov-2 pathogens.

AFFIX Labs offers a binding technology which optimises the performance of silane quaternary ammonium and makes the use of the critical material widely available in disinfection of surfaces and increasing safety.

akvola Technologies, Germany

Funding: € 197 048

akvola.com

In this specific project a fine bubble generating technology should be fitted for new applications in the raw materials sectors, mainly the recycle of Li-ion batteries and increasing resource efficiency in mineral ore processing (upgrading froth flotation). Since the crisis has hit the world economy, we have seen a substantial decrease in business activities in some of our main markets such as automotive and metalworking and some of our main geographies such as China and the EU. We have since then put product and business lines on-hold and are focusing solely on expanding our component business based on the bubble generator product and looking for new applications that are more sustainable and more digital. The EIT RawMaterials funding is perfect in helping us adopt to a new market and a new application in a post-pandemic world.

aSmartWorld, Belgium

Funding: € 199 694

akvola.com

The Booster Call in response to COVID-19 crisis will allow us to build the necessary strategic infrastructure to increase our international market outreach planned from 2021 and greatly accelerate the scale-up process. Our project objectives are aiming at structuring our network of business partners to secure procurement and at improving our consumer outreach through branding activities.

Astroock, Finland

Funding: € 175 078

astroock.com

The business idea is to provide mining companies a tool to distinguish ore from waste rock before extraction from the mine. At the moment mining and mineral exploration companies have run down their exploration activities in Finland, which has dramatically affected Astroock's volume of orders. Geotechnical services are mainly carried out in Sweden and has suffered greatly from the travelling bans and quarantines.

This project will create another business area for Astroock which does not rely on travelling and is not as cyclic as exploration, which always suffers first and most when financing becomes more difficult. The new area is equipment sales to existing mines.

Betolar, Finland

Funding: € 181 550

betolar.com

Pre-pilot preparing:

- Filing patent, laboratory tests

Piloting:

- Preparation: Lock-in resources and procurement of materials and equipment
- During pilot: Guidance and supervision, R&D
- Post pilot: Follow-up by third party, meeting at customer
- Our R&D work has been highly impacted

Our laboratory work has practically stopped entirely for two months after the restrictions took place due to COVID-19. One of our company's key competitive advantages is our recipe technology and know-how which at this stage, requires intense on-site laboratory work. At the same time, variable and upkeep costs are running which can turn out to be detrimental for start-ups.

Our market expansion activities slowed down. Our biggest business and environmental impact is in international markets where the mining business is extensive. This is why we have conducted market research studies to validate which markets to expand to. We were supposed to travel to South East Asia to meet important players but due to COVID-19, we have not been able to open discussions.

COVID-19 causing uncertainty around the immediate future. The mining industry has seen considerable indirect effects of the pandemic, see chapter 2.2 for detailed impacts.

Goals with this grant. We are at a stage our R&D work depends on our business development advancements and vice versa. Corona has clearly affected both of these which is why the EIT grant will help us get through this bottleneck. In other words, the grant will help us to reach the following goals:

- Expand the Intellectual Property (IP) portfolio in our mining application area
- Carry out customer validation and pilot testing with our highly new and unique recipe innovation

Bind-X, Germany

Funding: € 200 000

bind-x.com

Carrying out final customer validation / pilot testing in South Africa (towards TRL 9) // scaling up of internal and external production capacities in Germany and Belgium // optimising IP protection through broader nationalisation of already filed patent // enabling first sales and revenues (towards CRL 8). Our contract manufacturer in Belgium was unable to produce for 2.5 months due to lock down // Cost of one of our main product components increased by 19%, cost of logistics increased as well // Complete bans on (personal) travel and (product) transport between Europe and South Africa // Lockdowns in South Africa imposed restrictions to enter mines for field testing and demo pilots.

BioSO4, Finland

Funding: € 200 000

bioso4.com

BioSO4 produces "Smart Package-Treatment systems" (SPT) to mining industry. The SPT-system contains modular package-treatment units which are upscaled to customer's needs. The smartness is based on the selective recovery of sulphates and metals by recyclable biopolymers and adsorbents. The process yields sludges and concentrates which have potential industrial use as fertilizers and raw materials. First customers are large mining companies such as Outokumpu which develop continuously their environmental processes. Treatment of seepage waters of mines are comparable to treatment of acid mine drainage (AMD) which is global challenge. The next business opportunity is to develop usability and viability of SPT-concept towards mineral processing applications. The objective is to offer zero-waste solution by service and market it a part of the development circular economy in mining. Company had very good sales months 1.1.2020-28.2.2020. COVID-19 crisis reduced sales significantly during March-May 2020. Big part of customers delayed many water treatment projects due to COVID-19 pandemic. This project would help in restarting sales by providing

references for minipilot-experiments and industrial-scale filter-units. In this step BioSO4 would need face to face meetings and piloting in customers processes.

Bryne, Sweden

Funding: € 106 000

bryne.se

- Review of available techniques for digital read-out and result storage system for LOOP.
- Develop the digital system in the LOOP workstation.
- Full scale test of LOOP at customer site to receive data for marketing.
- Create marketing materials, as films, homepage, printouts.
- Spread the results and start the marketing of LOOP.

Bryne has a strong position as a service provider to the Swedish casting industry. As many foundries are closely committed to the vehicle producing industry about 80% of the normal turnover of Bryne has been cancelled due to COVID-19. Product development is a relatively big business for Bryne. As Bryne has invested in an in-house development centre the internal development facilities normally cover most of the development need in the product development route. As most of the incomes has been cancelled the liquidity do not allow the continuation of the development because the costs (mainly expenses concerning personnel) are not in balance vs. the incomes. In order to keep the competence within the company, the need of incomes is crucial to sustain the ability to develop product and services for the time after COVID-19.

CIRCULARISE, The Netherlands

Funding: € 180 175

circularise.com

The business idea subject to this proposal is the automation and technology extension necessary for all other stakeholders along the supply chain of our current customers to use the system. Currently it is difficult for other stakeholders along the supply chain of our direct customers to get involved. Circular Economy however requires the communication between all stakeholders along the supply chain. This is why this project builds:

1. a page within our app which is easy to use and only contains the things that indirect customers need including the relevant onboarding information (light onboarding). This is targeted at the automotive sector which our current customers are already supplying to.
2. an API for automation by third party users. Currently the system has to be used through the Circularise web application. Companies are however used to manage all their materials and suppliers through one main management support system e.g. SAP. This new functionality would allow the integration of Circularise into this type of management system through an API/Server which companies themselves can use to integrate the system more easily. This decreases the onboarding process by 50%, increases the usability of the user and makes the app customizable.
3. a specific UX-Design for the automotive sector. This will allow Circularise to fulfil the needs of the car industry and allow the adoption of the technology in that sector. The COVID-19 crisis has led to an R&D stop among 75% of our customers and respectively follow-up contracts with them were put on hold until the end of the year. COVID-19 resulted in investor contracts not being signed as well as indefinite postponing of contracts with a Japanese and a German automotive company. This project

will allow us to prepare for the reinitiation scheduled for the upcoming winter. It will also speed up the process and allow further automation of the system use and therefore increase the number of departments involved in the uptake. We use this break to optimize our onboarding and usability for other supply chain stakeholders in order to catch up after through more efficiency.

Comminution Reimagined Sweden, Sweden

Funding: € 200 000

CRS is developing a new technology for the milling of rock ores. The project includes extensive further laboratory testing of crushing energy and mineral recovery with the new process and commencing the design of a larger pilot mill.

The project is set up to be funded by a minimum of three mining companies. In mid-May our third funder withdrew citing the COVID-19 impact on their business. Three potential replacement funders have cited COVID-19 as their reason to not join. We are in discussions with two more companies but could run out of cash before we complete the test work needed to convince them to join. Securing funds to continue operations to the end of 2020 will give us a chance to complete this work, progress the development programme, and potentially restructure the programme to reduce the total funding requirements.

Contento Trade, Italy

Funding: € 160 000

contentotrade.it

To build a pilot plant capable of treating 10 kg/h of spent sulfuric acid from TiO₂ production obtaining materials with high added value, including concentrated purified sulfuric acid, iron sulfate and vanadium pentoxide We were working with an important TiO₂ producer to develop the pilot plant for our technology but after the COVID-19 crisis they stopped the collaboration for the lock down in Italy. At present we still don't know when they will be able to re-start the collaboration.

danalto, Ireland

Funding: € 200 000

danalto.com

1. Development and implementation of automated tracking of personnel and assets in Open-Pit Mines.
2. Go to market strategy and stakeholder workshops with LTU and Boliden.
3. Close collaboration with target customer Boliden for validation and customer on-site field testing.
4. Negative impacts on sales and business development; equity investment markets; talent retention and development, and overall business plan execution.
5. Greater than 70% impact on revenue through April and May 2020.
6. Efforts to raise investment stopped abruptly in March 2020.
7. EIT RawMaterials funding will allow danalto to enter the mining market, fund pilots with customers (Boliden) and refine a go-to-market strategy with experts in this area.

DexLeChem, Germany

Funding: € 200 000

dexlechem.com

In order to implement ChL in the field of precious catalysts, you need to be able to increase their performance (see Figure 1). This is where our services start. Founded out of the German Scientific Cluster of Excellence UniCat (Unifying Concepts in Catalysis), we possess proprietary know-how that enable us to develop so-called catalyst re-using processes which increase the output of product produced per unit catalyst consumed up to 82%. The business partners and the environment shall benefit from the co-creation of resource-efficient and innovative catalyst re-using processes and fair profit-sharing (cost savings through less catalyst manufacturing costs and higher product output will be shared jointly, see Chemical Leasing case studies from the UNIDO).” Being an innovation provider for the chemical-pharmaceutical industry, our customers are freezing budgets due to the COVID-19 crisis. Subsequently, project candidates were stopped. The EIT RawMaterials funding will help building up the chemical leasing model securing long term revenues by collaborating with a catalyst manufacturer.

Ecomation, Finland

Funding: € 200 000

ecomation.com

To finish the building phase of ECOURMIN project abruptly interrupted due to COVID-19 crisis and continue the company operation after it. The goal is to realize and deliver the two already agreed projects making it possible to expand sales globally. ECOURMIN project was in motion at the beginning of this year. However, the COVID-19 crisis interrupted the realization of the pilot project, to carry out final test and demo.

FACT Industries, Estonia

Funding: € 57 704

fact-industries.com

We propose a new contactless technology to manufacture multi-material parts using 3D printing technology. We estimated that implementing 3D printing technology will decrease the involvement, e.g. machinery, human resources, etc. in the production process. Furthermore, this technology will significantly decrease the economical and manufacturing risks linked to emergency situations, as it requires minimized human involvement in production. COVID-19 influenced both on our workload and revenue. The team could not work as planned in the laboratory and we had remarkable delays. Furthermore, we had a decrease in expected profit which planned to be invested in the new technology development. Unfortunately, caused by this delay in the investment we lost our customers.

FATB, Finland

Funding: € 191 000

eafecs.com

FATB’s first objective is to successfully finalize the first test period project, evidencing the EAFecs service benefits. Second objective is to prepare all equipment for the already signed new EAFecs project and start the installations in fall 2020, as well as start tests at site. Third objective is to design a new control system for electrodes by using external expertise from universities that have been already contacted. This is important in order to utilize all accurate measurements that the EAFecs system has already proven. Other possible system applications, such as reactive power measurements in grids, will be evaluated by discussing with

potential end-users. Our two pilot customers in Italy stopped their steel production in February-March due to the virus outbreak. The first pilot was in final test stage and we expected to start our commercial negotiations soon after few more rounds of pilot testing; this has now been delayed. Now they started production, but because of travel restrictions we have been forced to spend extra costs for a local company to supervise the tests. For the second pilot, we have already purchased our equipment, but because of COVID-19, the client asked to postpone the delivery until fall 2020. As total, our schedules have been delayed for about 6 to 9 months and this we could not anticipate in our original funding schemes.

EIT RawMaterials funding will help FATB Ltd to survive until we get steady cash in-flows and would allow us to develop the EAFecs system control to the next level, as well as study other possible system applications. Present travel restrictions give sufficient time for such development work.

FLAXRES, Germany

Funding: € 200 000

flaxres.com

Assembly of the system, commissioning, tests and pilot operation of the system (technology tests), improvement of process steps. Massive project delays due to late deliveries:

- Increased effort due to lack of personnel.
- Increased costs construction, procurement and material (search for new regional and international partners).
- Currently no opportunities to receive further compensation or funding.

Flowrox, Finland

Funding: € 200 000

flowrox.com

Project objective is to design 10kW Plasma Oxidizer and to develop required competences. Planned activities are as follows:

- Conceptual design of generator & pulse shape definition and related tests to be able to increase power from 2kW to 10kW.
- 10kW Generator design including circuit redesign, control algorithms and cooling elements & Wire element design.
- Construction & testing of the test unit.
- Competence development including establishing generator supply chains, work instructions.

During the COVID-19 crisis, daily business has continued relatively well at Flowrox but challenges have arisen from postponed customer investments which has significantly impacted on our revenue, and operating profit, enforcing cost cuts and lay-offs. In addition, delays in supply chain, decline in freight reliability and speed and costs have skyrocketed. On top of all this customer trials and visits have almost grind to a standstill causing considerable setbacks. Cost cutting is especially hurting R&D including development of the 10-kW FPO module which was scheduled for 2020 but postponed due to COVID-19. EIT RawMaterials Booster Call comes in perfect timing to help mitigate the impact of the COVID-19 crisis on scaling-up the FPO to the mining and minerals industry scope, maintain partnerships and deliver the needed market demand. And finally, we even needed to change the name of the Plasma Oxidizer, as it was first called Flowrox Corona!

GreenIron H2, Sweden

Funding: € 161 366

greeniron.se

To enable GreenIron to keep up momentum in testing and optimization of customers materials in our demonstration furnace and continue to showcase GreenIrons energy efficient and clean technology despite the economic slowdown due to the ongoing COVID-19 pandemic. The COVID-19 crisis has made our clients increasingly reluctant to commit any money to technical development work which has had a detrimental impact on GreenIrons ability to test and validate GreenIrons technology with customer specific material. The pandemic has delayed our testing schedule, which has resulted in a slower progress of GreenIrons go-to-market strategy and has put additional pressure on our limited financial resources.

GUARANTEED, Belgium

Funding: € 194 835

guaranteed.be

The focus of GUARANTEED is to repair or rebuild large slow-moving components beyond conventional techniques, thereby prolonging the life of ageing industrial equipment, reducing long lead times and eliminating storage costs. Besides these direct bottom-line savings, the reduced need for raw materials and transport allows to expand the benefits of our technology to society as a whole. With the addition of a MARS (Mobile Additive Repair Service) solution, which is the focus of this proposal, we believe we can add additional value to some of our key target sectors, especially in the wake of COVID-19.

Within the Booster we have scheduled the following activities: (1) Business concept validation & Specs (2) Solution engineering for maximal agility (3) Ensuring hardware and software compatibility When Guaranteed was created mid 2019 by ArcelorMittal, Finindus and OCAS, the original business plan was supported by a shareholder pilot application inside the ArcelorMittal production plant in Ghent for the repair of continuous casting rolls with an identified potential yearly gain of over 550 k€ which could be further expanded towards other applications inside ArcelorMittal Belgium as well as other plants inside the ArcelorMittal group with yearly gains potential of 4 M€ and up. This pilot application also motivated the decision to construct the first Guaranteed production facility within the ArcelorMittal factory in Ghent. These early stage revenues would allow the company afterwards to grow by either investing in additional production facilities at various geographic locations (customer proximity) or by investing in mobile production facilities.

As a direct consequence of COVID-19, steel demand in developed economies is expected to decline by 17.1% in 2020. The automotive sector is expected to be the worst hit. Given the steel intensity of the automotive sector as well as the strong focus of the ArcelorMittal Ghent production plant on producing advanced high strength steels for the automotive sector, this translates in an even higher reduction in output for the plant in Ghent, thereby also impacting the pilot application of our business plan.

Through this booster we want to accelerate the development of a mobile solution to transition faster to a balanced revenue between sales from third partners and the original pilot application from the steel industry.

HOVERING SOLUTIONS, Spain

Funding: € 200 000

hoveringsolution.com

1. Prototyping of TRL8 robotics.
2. Demonstration and validation in customer facilities (CRL8).

3. Expansion to America and remote operation of robotics (mitigation for COVID-19 travel restrictions). The company is aimed to operate worldwide, offering underground scanning services using its robotic technology. Nowadays, the services are provided directly by Hovering Solutions' staff, who needs to travel to the mining site to capture data. COVID-19 has significantly restricted travelling and overall mobility almost worldwide, making impossible for Hovering Solutions to travel, hence stopping or reducing the data gathering services.

This call will help the company to keep up development activities, focused on mitigation of future travel restrictions.

INNCEINNMAT, Spain

Funding: € 195 243

ceinnmat.com

Develop a metallurgical process using microwaves to obtain tungsten concentrates and polymetallic tungsten ores into intermediate products of commercial relevance.

Generate a prototype microwave system as a part of a mobile plant on main site, to validate all the process, this pilot will be used as a demonstrator for the stakeholders and as a testing device for customers. The event of the COVID-19 crisis stopped suddenly all the trials and implementations of the new technologies developed by CEINNMAT. These activities were particularly addressed to the European market, but also has had some delays in relationship with South America. The presence of the technician and researchers from CEINNMAT in the customers facilities are essential for our activity and these were postponed up to new conditions.

This situation has created a general delay in supply to costumer with the payment delay, including penalties on the contract due to delays, that is affecting right. Also, in longer-term by postponed delivery in the current works, and interrupted negotiations for future works.

Previous the local delays of COVID-19, a very unusual previous one was also detected with the supply of some electronic components during the latter part of 2019, recently identified as a related event due to the partial dependence on the Chinese market in these electronic components.

The impact has affected to CEINNMAT on metallurgy line, firing line and ceramic processing line, as well as the tender supply, in this case, only delay with the subsequent payment delay, but mainly to the line CEINNMAT bases its activities on technological research providing new solutions for the market, and the metallurgy line is strategic for CEINNMAT, as concluded in the study of "Report for economic value of the know-how and patents" developed by an external office for the company.

TUNER WOLF project will cover an economical gap based on activities on metallurgy, will de-stress the technology research business line, but mainly, will generate a demonstrator of the technology that will increase the trust of customers and collaborator.

Innovando, Italy

Funding: € 200 000

innovandotech.com

A platform capable of sensing the residual lifetime of industrial batteries by building a tactile internet infrastructure. The data produced is supervised by machine learning algorithms and this can allow precise forecasts of the number of composites that are about to enter the secondary markets. The company observed a restriction of -75% on its revenue compared to the same period of last year, which is -44% below the projected forecast for the quarter, and -25% is the current forecast for the rest of the year.

The COVID-19 Booster will grant us to keep up with our schedule of technological developments, planned for the next two years.

Intrapore, Germany

Funding: € 107 660

intrapore.com

The objective of the project is to combine and field validate our two innovative services intrasense® and intraview® at several coal mine sites in Central Europe, owned by the RAG Group, the largest coal mining corporation in Germany, and then integrate them to design 2 to 3 full-scale applications of intramine®, our advanced new nanotechnology able to mitigate the environmental impact of mining wastes. Our solutions will definitely play a crucial role in the post-crisis scenario, driving the next sustainable technology revolution in the groundwater remediation market for the mining industry. The COVID-19 crisis has been largely impacting our company business. In more details, we are facing enormous difficulties with several events and contracts delayed, with an expected lack of business of approximately EUR 300 000. Thus, to preserve employment and maintain our innovation capacity we have reduced the working hours of our employees by 35% starting from 1 April 2020 (i.e. Kurzarbeit).

iumtek, France

Funding: € 200 000

iumtek.com

The adoption of measurement instrument has traditionally been hampered by calibration. Making measurements requires knowing approximately what one is measuring. Then calibration means first measuring known samples and then deducing unknown samples' characteristics by interpolation of the known samples' measurements. This is extremely time consuming. Furthermore, it is also not robust: measuring an inhomogeneous material flow requires constant recalibration, which is not feasible.

Using data driven algorithms is a paradigm shift. What is measured is never random. Data driven algorithms group what is similar (in this case, emission spectra) into "clusters". These clusters can be characterized posteriori. There is no longer any need of calibration and it is robust. IUMTEK is two years old start-up, with more than 25 prospects - multinationals' R&D departments. COVID-19 has stopped all procurement processes. This project will help IUMTEK conceive a game changing product, while it is waiting for a new "normal" and the market starts investing again.

Kierto Ympäristöpalvelut, Finland

Funding: € 200 000

kierto.fi

The project is essential to finalise technological development and pilot for large industrial scale. At the same time the company will renew its business model to support growth for European markets.

- Technology optimisation: Finalisation of the A-Reg treatment by optimising the technology to all use cases in surface treatment industry. The main development requirement by commercial use of the technology is to create the equipment for removal of the metal salt phase from the colon. Current manual process is not an economically sound way of operating on a larger scale. Implementation of the needed modifications and additions to the technology like automated extraction machine to the process.
- Validation and verification through industrial piloting, testing and concept proof.
- Business development: Dissemination activities to create awareness of the concept. Partner search to create a network of trustable partners for marketing, operations and support. The COVID-19 crisis has affected Kierto as a company. Our company is an environmental management company.

The industry was by our government named as a critical area for the functioning of our country. We have had to adjust our operations considerably for the current crisis, which has had a serious affect to our cashflow situation and investment plans for time being. The majority of increase has come from personnel costs. We work in three shifts and we have divided personnel into smaller work teams. We have not been able to mix employees in between groups as a security measure. This has led to situations where we have had to use rented workforce. Although our revenue has increased, we have significantly lower profit margin. Hence, we are not able to invest.

Labor, Italy

Funding: € 150 000

labor-eu.net

Product engineering, demonstration in relevant environment, prototype demo in operational environment, product qualified through standardized certification tests, industrialization plan, market test. The COVID-19 crisis has heavily negatively impacted our current NPD (New Product Development) service business, reducing revenues and opportunities. We need to reposition quickly the company on the exploitation of own IPRs and technologies, catching the opportunity to develop healthier and environmentally friendly solutions for a world which has changed approach and is ready for taking up fast smart technologies and lean processes.

Latitude 66 Cobalt, Finland

Funding: € 200 000

lat66.com

To discover economic concentrations of cobalt mineral resources located within the bedrock of the company's landholdings, using modern and innovative techniques in geological research and mineral exploration. COVID-19 impacted our operations by causing delays, challenges at field work and other issues making all developments. The winter 2020 field campaign was reduced. EIT RawMaterials funding will get our teams back to field work and accelerate the execution of our strategic plan.

Lekatech, Finland

Funding: € 200 000

lekatech.fi

The project builds on the technology prototype that was finalised in early 2020. The technology prototype has proved the applicability of the newly developed technology for the intended purpose. Now, in this project, we aim to study and validate further the technology and prepare the next development steps. There are 4 work areas in the project: 1) Research in rock mechanics in relation to the technology (master's thesis work); 2) Testing of the technology prototype in relevant condition to verify performance and its limits; 3) Research on alternative mechanical structures to enable optimal structural choices in next development stages; 4) Setup next stage development project. We successfully reached the technology prototype stage in our development. We demonstrated the technology to relevant globally working European industrial parties and they have shown interest to collaborate with Lekatech. We have closed LOIs and EOIs with them to demonstrate commitment. The crisis has most of all influenced the risk financing and the well started investment negotiations were stalled due to the crisis. With the help of EIT RawMaterials financing we aim to continue the development work and be ready for a big push right after the project end. This way we would not lose the time, which we see critical for our success.

Magment, Germany

Funding: € 200 000

magment.de

Build and test in real life environment first prototype with full functionality including solar on-grid systems. Testing all relevant segments (electrical system, mechanical construction and materials, solar system, security sensors and UVC-LED lights) preparing upgrades and productions plans for series 1 of product (10. Pcs financed by City of Thessaloniki, Greece or EU funding). Test wireless charging stations and electric scooters working with MagCleanseUV in real-life environment.

Test, proof and measure UVC radiation and rays inside object and certify system (Certified microbiology laboratory in France). Make plan for series production and supply chain together with production and representative partners.

Prepare marketing strategy and materials (flyers, brochures, technical sheets, website, etc.), contact interested customers, and use social networks and other channels to find new customers.

Establish sales and business development network in Europe (EU and UK) and USA (with headquarter in Washington D.C. and pilot project in Purdue, University campus). Book pre-orders for 2020.

Proof and test EU and USA installations eventually make upgrades and small changes and organize series 2 production for 2020. Our company and team put main focus in 2019 on development MagDock - e-scooter wireless charging and docking station. We have done:

- successfully test prototype and made already for serial production in early spring 2020, agreed partnership with PowerMobility from Israel and Sujan Group from India,
- developed wireless charging upgrades for world leading e-scooter sharing providers (Bird, Lime, Vol, SPIN and Gotcha).
- agreed pilot projects in Europe (Germany, France and Greece), Israel (Tel Aviv) and USA (Purdue University).

- agreed JV and investment with Power Mobility from Israel, and all is stopped (Israel is still in hard lockdown)

After this “apocalypse of sharing scooters” we start to develop hands free disinfection solution and apply for patent “Ultraviolet Germicidal Irradiation (UVGI) System for Disinfection of Micromobility Parking Stations” on 1 April 2020 and start with full capacity to develop MagCleanseUV.

Pandemic situation made investments in companies connected with sharing scooters delayed, cancelled or unsecure. Investors are waiting to see what will happen with market. Leading e-scooter sharing companies are hurt and fighting for survival (valuations are dropped for 80%, laying off many staff and closing operations in many cities and countries). In that situation our investment round is delayed, our up-to-close-deal investors (with finished due diligence) are waiting and we are out of money to do development and market of such product like MagCleanseUV. Our team has knowledge, expertise, energy and connections to do such job, but without financials we are unable to do this. MagCleanseUV is not just new product which will bring company big revenue and profit, which will provide users virus-free vehicles, bring order in cities and help sharing providers increasing number of rides. MagCleanseUV is life saver of our product MagDock (wireless charging station).

Magneti Ljubljana, Slovenia

Funding: € 169 237

magneti.si

Introduction of two new improved grades of Sm2Co17 permanent magnet materials to the production scale and their commercialization. The company had lost 40% of its revenue due to the COVID-19 crisis, and it is expected that the company will suffer a cut of around 50 jobs by the end of June 2020.

The project will help the production of enhanced Sm2Co17 magnets, increase the competitiveness of the Sm2Co17 magnets which in turn is expected to increase the sales for the company.

mecorad, Germany

Funding: € 200 000

mecorad.com

Finalize product wtl series and be ready for sales, update SW development plan & operations, expand marketing for product sale We have experienced a sharp drop in turnover by cancellation of planned projects; suffer from restrictions to carry out work and expand the team, especially internationally, to continue the planned growth; the next financing round seems not to take place this year.

MetalCirc, Finland

Funding: € 198 630

metalcirc.com

We have an innovation to produce material for end-products for antimicrobial, including anti-coronavirus, applications in surface coatings.

- piloting & up-scaling
- antiviral coating preparation and testing for antiviral (COVID-19) applications
- business development and market survey

Due to COVID-19 crisis we have not been able to market and contact our potential customers in a normal way and customers have not been responding our inquiries. This has had a dramatical effect on our growth expectations.

Metals Hub GmbH, Germany

Funding: € 200 000

metals-hub.com

The majority of metallic raw materials are traded “over the counter” (OTC) with limited or no price transparency for the traded goods. In order to stay informed industry and trade are buying price data from price-reporting-agencies. However, these price-reporting agencies collect pricing data via a journalistic approach and cannot base their indices on validated transaction data. As a result, the reported indices are can easily be manipulated by market participants providing data. Furthermore, since Brexit there is no major price-reporting-agency located in the EU anymore.

Metals Hub is aiming to utilise the data from metal trading activities on the Metals Hub platform for creating transparent, reliable and accurate price indices and providing those to raw material producers, trading companies and metal producing companies through digital tools. The users of Metals Hub are steel companies, foundries and producers of metallic raw materials many of them suppliers to the automotive industry. Due to low demand for raw materials the Metals Hub platform has seen a decrease in trading volumes and with the platform revenues (Gross Merchandise Value GMV) by 50% (Q1 2019 compared to Q1 2020) and even 75% when comparing Q4 2019 with Q1 / Q2 2020 (see Figure 1). We expect Q2 2020 to be stagnating at the low Q1 levels. Despite a decrease in transaction value the overall number of transaction and negotiations has increased during COVID-19 in Q1 compared to last year and is expected to be flat in Q2. As a significant number of the companies in the industry are facing a difficult economic situation and worsened credit ratings, they are now looking at cost cutting measures such as automation and efficiency improvements. A digital raw materials platform is providing them with a low cost and easy to implement efficiency increasing tool. Therefore, Metalshub has seen an increased interest in using digital procurement and trading solutions for raw materials and negotiation activity on Metalshub.

Metheore, Belgium

Funding: € 107 482

metheore.com

The two major activities are:

- Ending pilot test in real environment
- Finalizing software development

The goal is to be able to make widespread sales in 2021 thanks to a full operating system (hardware + software) allowing crushing plant automation based on grain size analysis. Impacts of COVID-19 on our business are quite clear:

1. No access to clients' sites during several months to install orders received before the crisis which causes a huge delay for the payment.
2. Most of our clients stopped investments in new technologies for 2020 which impacts our estimated turnover for this year.

3. Lime industry will be impacted for a long time and estimate a return to normality for the end of 2021. Therefore, we also expect to be impacted during that period.

It was planned to finalize the automation part of our innovating technologies with Metheore's budget, but it has been difficult because of the actual crisis.

MINESPIDER, Switzerland

Funding: € 180 800

minespider.com

- Develop template system to provide information for compliance with the new EU Conflict Minerals Regulation
- Develop Real time data analytics to evaluate data provided in the templates
- Pilot the Solution
- Marketing and PR of the solution Companies have reorganized business priorities to address the challenges to production and the supply chain brought about by the global pandemic.

Activities that are not immediately related to product supply and customer fulfilment have been placed on hold or relegated.

Multispectral Microscopic Technologies, Spain

Funding: € 88 234

amcosystems.com

Carry out pilot tests in mines, validate the system in real environments, compile new mineral reflectance database, port system to Zeiss microscopes, fine tune system software, reach an agreement for commercialisation, promote the system in a specialised international congress. The COVID-19 crisis hit us when we were carrying out test analyses on samples from a prospective customer of the analysis service, ready to start the first pilot test of the system at a mine and signing an agreement to carry out a pilot test at a copper smelter. All these activities became suddenly impossible in mid-March, and had to be postponed for several months, at best.

This will have a deep impact on the expectations for the year, in which we hoped to achieve the first sale of the system and create the first job, both of which currently seem quite unlikely. The immediate effect will be the corresponding loss of income and the inability to hire the first employee this year, which will surely be felt in the next two years as well.

However, if this project is approved, it will provide enough funds to support the work plan of our company during the second half of the year, allowing the hiring of one engineer to carry out the pilot tests at the mine and the smelter, the compilation of the new mineral reflectance database, the porting of the system to another make of microscopes, and the completion of software development, greatly improving the commercial expectations of the company for the next and the following years.

Neurality, Italy

Funding: € 110 000

neurality.it

We plan to develop and deploy an automated computer vision system to check filter-presses' filters integrity during their duty cycles. This will be achieved through the installation of several SWIR cameras on the cleaning robotic arm already present on the target machine.

The images will be processed by an Artificial Neural Network based on a remote server, able to detect irregularities (damages, tears, etc.) on the filter pattern while ignoring occlusions by the cleaning mist or the residuals of the material leftovers of the mining tailings. Neurality was founded in November 2018, so it is hard to judge in such a short period. Working mainly on R&D projects, our start-up had several projects cancelled due to our client's situation caused by the COVID-19 pandemic. Moreover, the only project still running, with a company named C&C Group S.r.l located in Cesena (IT), and for which we already emitted an invoice, is having huge delays as a result of COVID-19. Receiving this Booster grant would allow our start-up to get back on track in a competitive position with a highly requested product ready for the market.

NORIMAT, France

Funding: € 200 000

norimat.com

The ambition of the project is to industrialize our new process to make high performance cutting tools. The previous call from EIT RawMaterials leads to the development of first prototypes (TRL3) made on commercial tungsten carbide powder have shown hardness enhancement around 15%. Now we need to confirm these promising results and increase our production capacity (TRL5 to 6 expected). First of all, COVID-19 forced us to stop the production activities for more than 1 month, delaying our technological development. We chose to maintain our staff and his competences despite the cash burn to be able to start harder after the crisis.

Then, our first market targeted is aeronautic which is highly impacted by the crisis. Our business development on this sector is compromised for the next months (without any vision on the end of these effects). It is imperative to us to diversify our activities.

Open Mineral, Switzerland

Funding: € 200 000

openmineral.com

We plan to grow the company while continuing to generate cash, and then consider our strategic options. For the software we are currently adding the advanced blending big data analytics, plan to develop more tools to support the trades, a mobile application, an interface for additional commodities. In terms of business we are planning to enhance services to supports trades (financing, logistics, quality control, price hedging, etc.) and develop into other commodities with time.

We have assembled a unique team of people with years of experience in various aspects of commodity trade operations, management of metals and mining companies, and research. So, we have in-depth knowledge and experience in the metals raw material markets, which, coupled with the software engineers and data analytics talent we have built up, gives us a unique capability to develop the commodity trading platform. We have proven our business model over the past few years - the company developed the platform to source

and place metal concentrates and has built up the capacity to execute trades, including contracts, logistics and trade financing, risk management, payment, etc.

This project can perform a vital role of supporting Open Mineral at a time when we need to move toward our next stage of growth – via increasing volumes, liquidity, and profits by moving more material through the platform (the system is designed for both spot and annual contracts). Our continued success relies on the smooth continued flow of trade globally – particularly mineral concentrates. The uncertainty for the next 12-18 months due to COVID-19 will drive a higher requirement for buffer capital for our company. Capital is key to scale our business quickly and support our initiatives to transform the opaque concentrate trade business into a more transparent and efficient market.

OPIGEO, Italy

Funding: € 198 880

opigeo.it

OPIGEO SRL is a start-up with the main aim to sell “eco-binders materials and their products” based on alkali-activated cement formulations (GEOpolymers). The competitive advantage of OPIGEO production is the strategic furniture of “reactive powders” made by aluminium-silicate waste valorisation. During the past three years throughout research project (ERDF of Veneto region) and training (EIT RawMaterials Accelerator, RM Booster), founders had the possibility to consolidate the technical and commercial aspects of the business. OPIGEO will start the activities using in its formulations foundries by-product slag (signed contract with Foundry Corrà and Foundry CFD) in partnership (possible investor) with Bellitalia Srl that will guarantee the management of the industrialization process in the first production site We start a new activities on waste valorisation to introduce in the market a sustainable approach to the crises with the principle of circular economy. New business ne opportunities. OPIGEO is a new start-up.

Particular Materials, Italy

Funding: € 139 588

particularmaterials.com

With a single technology we are able to recover precious resources otherwise lost to landfill, reduce toxicity of industrial wastewater and synthesize a high value nanomaterial with a large market footprint. At a fraction of the cost. To do so, we will need to:

1. Upgrade of the plant unit to treat Ag and CN- containing wastewaters
2. Test the plant unit with synthetic wastewaters @pilot plant
3. Test the plant unit with 3rd party wastewaters @pilot plant
4. Validation of Ag powder product with customers
5. Dissemination of the technology COVID-19 emergency has drastically slowed down our development and growth, it affected most of the interaction with our potential customers and partners by slowing down or halting our ongoing conversations, and has greatly reduced the possibility of testing with the pilot plant, developing new process designs, new materials and above all disseminating the technology. Ongoing projects with academic partners were similarly put on hold, effectively zeroing any scientific and technical feedback.

PM team has continued to perform all those activities that did not require external interaction, such as chemistry and process optimization, small runs in the pilot plant, R&D of novel compounds, in-depth analysis

of products and wastewaters, within our internal capabilities. As of today, we have yet to restart about 2/3 of the activities we had before the COVID-19 crisis. This project will enable the company to achieve the last step in its expected technological development.

Process Genius, Finland

Funding: € 114 414

processgenius.fi

Building infra and API& SDK to connect typical minerals processing plant. Execute pilot project and expand market reach in Raw materials segment. Revenue is approximately 30% lower than anticipated for march to June. EIT RawMaterials funding will significantly improve our ability to keep up a good level in R&D during COVID-19 dropdown and further allow us to scale and globalize business more effectively.

Purified Metal Company, The Netherlands

Funding: € 200 000

purifiedmetal.com

During the project the hot commissioning of the furnaces and casting machines will take place. The hot commissioning has been delayed because of late delivery of critical installations and lack of commissioning support from the supplier in the UK. COVID-19 has caused a delay of the start of operation of PMC from 20 July 2020 to (earliest) 17 August 2020. The delay of start of operation is caused by COVID-19 events (delay in the delivery of critical installations, the impossibility to travel to the Netherlands for personnel of a supplier from the United Kingdom for commissioning of the casting machine and therefore consequences for the timing of hot commissioning and start of operation). Due to the late start of operation PMC is confronted with a later start of sales revenue (feedstock and end product) and additional costs for a period of minimum 4 weeks. The Booster funding will be used to overcome cash needs (costs for personnel and other costs) during the weeks of delay.

Radai, Finland

Funding: € 75 564

radai.fi

Radai will develop radiometric survey system for a fixed-wing drone. This system measures gamma radiation emitted, and it is used in mineral exploration to detect bedrock structures and mineralization. Mining companies and mineral exploration companies use radiometric systems for mineral exploration together with other exploration techniques such as magnetic and electromagnetic survey systems. Global COVID-19 halted travelling around the world and reason to that Radai has not been able to conduct any surveys in Sweden. Several magnetic surveys have been cancelled due to COVID-19. Revenue from these surveys will be postponed to the future. COVID-19 situation has also halted Radai's co-project with Matrix GT (<http://www.matrixgt.com/>) in Africa/Nigeria and we are now waiting for the global pandemic to give an opportunity to continue our project.

This project will help Radai's financial situation during COVID-19 and the project will help company to develop new instrument for mineral exploration and creating revenue for the company during next years. Radai has already customers which are interested about this product and they are ready for testing this system in their exploration areas.

REIN4CED nv, Belgium

Funding: € 200 000

rein4ced.com

Focus is on the industrialization and commercialisation of the Flamingo frame for the Accell Group:

- Industrialization of the medium Flamingo frame including ISO testing and rider testing
- Development and tooling of the S, L and XL frame sizes up to 1st prototypes
- Industrialization of the S, L and XL frame sizes including ISO testing and rider testing
- Commercial manufacturing of all sizes Our 2 current projects were impacted only by the timing of the introduction (initially July 2020, now the planned introduction will happen earliest in September 2020).

The agreed volumes remain but are delayed. The main impact of COVID-19 was at REIN4CEDs way of working: work from home became obligatory in the midst of growth of the team and as a result development and engineering slowed down and resulted in delays. With only a limited team on site, there also came delays in getting the production equipment operational.

It is now of utmost importance to be able to deliver on the first project. The bicycle market is watching us and is eager to see the first frames being delivered. If R4D succeeds in delivering this first project, then we already have feedback that other projects and clients will follow.

The financial support from EIT RawMaterials allows us to shorten the timeline and limit the impact of the delays. We can do this through setting a dedicated team of engineers on the project (their other tasks could then be outsourced, or passed to a new hire), set up the collaboration with very experienced CAD designers (>25 years of experience, which allows to shorten the design of tooling and moulds) and we would request our machine supplier to assist in production support to speed up the tuning of the equipment.

Resourcify, Germany

Funding: € 197 000

resourcify.de

The business opportunity we see is to offer a software enabled zero-waste service for businesses. The service shall leverage our existing waste management software, and combines that with our extensive recycler database. Available with just a few clicks, our solution would combine not only the service of traditional waste management companies, but also take-back systems for everything from batteries to spray-cans, and donation and charity initiatives such as food donation services. It would help every company to divert over 90% of all their waste away from both landfill and incineration, meaning true recycling and saving of valuable resources. Pre-COVID-19 we have been growing the business steadily, but COVID-19 has disrupted our customer acquisition, and meant no new signed revenue since March. We cannot do sales tours, and all new and expected projects have been delayed. During the crisis, waste has also increased in relevance. Recycling facilities are being overloaded, as more waste is being generated and thrown away in ever increasing quantities. COVID-19 is therefore the perfect catalyst for us to focus on taking the next step in our company development, contribute to our mission and create more demand for a service that tackles the very heart of the waste problem.

ReVibe Energy, Sweden

Funding: € 200 000

revibeenergy.com

The planned activities are revolved around marketing and sales activities to accelerate the growth of the ReLog vibration data logger to make up for the loss of sales due to COVID -19 during 2020. The ReLog vibration data logger was officially launched in December 2019 and beta-trials were expected to commence during January 2020. However, as our suppliers in China were unable to deliver during January through March due to COVID-19, we were severely delayed in shipping our units to the potential customers who were looking forward to testing the ReLog. When our suppliers in China got back to normal lead times towards the end of April, almost all of our potential clients had been placed in lockdown in accordance with different restrictions in their respective countries. This meant that the customers were not able to test the ReLog, and still haven't been able too, and as a result, want to hold off until purchasing units from us. Even though the first commercial product was sold in May 2020 to a customer in the Chinese mining industry, sales have been heavily affected by the COVID-19 pandemic in terms of our possibility to conduct sales activities.

Roctim, Sweden

Funding: € 149 200

roctim.com

The goal is to launch the first version of the simulator:

- include gamification and reporting components
- perform user-testing
- develop training material
- include environmental calculations

Due to the situation with the COVID-19 and our decreased revenues we were not able to finish the first version of our software in the beginning of the year which was our initial goal. With the support of the funding, we aim to hire new developers and launch our software by the end of 2020. Our focus is also to provide online training material and gamification features to assist the remote use of the software and increase user engagement which is valuable under the COVID-19 circumstances.

Scientific Visual, Switzerland

Funding: € 200 000

scientificvisual.ch

Adapt our current watch blank inspection technology to inspect Verneuil Carrots which are one step upstream in the manufacturing process. This has been requested by several customers who in total represent 40% of the world Verneuil production. We shall conduct test of 10 Carrots with 1 or 2 customers and move from current TRL 4 to TRL 6.

Move from TRL 7 to TRL 8 by doing the E2E test from defect detection in Raw Ingot for Micro-LED to wafer level. Move from TRL 4 to TRL 6 by adapting our technology to inspect GaN ingots.

The COVID-19 pandemic has delayed three major customer projects:

1. The order from a major sapphire grower for watches has been put on hold and we do not expect it to be released before Q1- 2021. The initial order was for 525k€ for the first system and would turn into a 4M€ order for the roll-out across their production.
2. We have sold a SapphiroScope, our quality control inspection system to an Austrian customer which is growing Sapphire for the production of high-quality wafers used for the promising Micro LED market. The customer is requesting to run End to End (E2E) quality test to predict the harvesting yield that can be obtained from an Ingot. Due to the complexity of the task as well as the difficulty to access the customer production, we must assemble an inspection system in our own premises and run the E2E test that includes the defect rendering from the ingot into the wafer. When achieved, Scientific Visual and this Austrian customer will make a significant breakthrough into the promising micro-LED market. In this case, Europe will be part again into the Sapphire production for Semiconductor substrates.
3. We were invited by the H2020 to an EU-Saint Gobain start-up pitch event in June 2019. Following this event, we have made some initial test for inspecting GaN produced by Lumilog (a subsidiary of Saint-Gobain) and prove that our technology can detect the defects in their production and therefore avoid processing initially defective materials. Unfortunately, their research lab is heavily affected by the COVID-19 crisis and only operates on a very slow mode.

Sencept, Sweden

Funding: € 200 000

sencept.se

Presence of challenging conditions such as high temperature, dust, and poor lighting conditions urges the need for atomizing the mining operations. Autonomous systems heavily rely on multiple sensors to visualize and interpret the environment.

Sencept is developing an Intelligent RADAR to empower intelligent mining in challenging environments. Our radar is a scanning sensor that can detect targets in three-dimensions in the presence of dust and other harsh environmental conditions. Advanced deep learning methods convert these detection points to classified objects, e.g., humans, trucks, cars, equipment, etc. Our business model is based on direct sales of the radar sensors and aftermarket services on the radar software to bring recurring revenue. We had discussions with major Nordic OEMs on initiating pilot projects to further develop our radar prototype. We also planned to bring external investment to cover our development and employee costs to help us move towards TRL7. Both Pilot projects and investments have been postponed due to the uncertainties caused by COVID-19 situation.

This project can help us finalize our innovation together with a customer. We will also use this project to evaluate our solution for different markets with faster return on investment to be prepared for post-crisis markets. Moreover, this financial support will help us keep the key resources and maintain the innovation capacity.

SiQAL UG, Germany

Funding: € 75 990

siqal.de

EIT funding will be used to make up for time lost in the COVID-19 crisis, secure IP, strengthen client relations in COVID-19 Europe and increase process TRL with partners the EIT RawMaterials network. Key activities include:

- Process development in-house and at EIT RawMaterials partner facilities. Customer sample production in our newly opened labs.
- Re-uptake of customer relations in a post-COVID-19 Europe
- Finalizing license agreement with an EIT RawMaterials partner (NTNU)

The COVID-19 shutdown has led to the closure of our labs since 15 March. In addition, it was impossible to travel to conferences and potential clients. As a result, we were unable to prepare samples for evaluation by our clients, nor could we provide R&D services that would have supported our cash-flow. Equity sources such as Business Angels and VCs have been very hesitant to support start-ups in the current times.

This project funding will support a rebound of our activities in 2020 to make up for the time lost. Current collaborations with our partners make it imperative for us to secure additional IP. This and a patent license from our EIT RawMaterials partner will further strengthen our IP position. Depending on how the crisis will evolve, budget from this project will also help us in running dedicated and isolated experiments with EIT RawMaterials partners.

strategies, Finland

Funding: € 200 000

strategies.fi

The research plan is based upon 120+ prior clinical researches that prove the effect of the device functions. It is also endorsed by the Chief Physician of Research (PhD) at the university hospital. And has been presented to Chief Physician of development (PhD) and the Chief Physician of nursing science (PhD). The research plan has been put together with the assistance of our best pain researcher, a university professor PhD, and Head of nursing science at the hospital.

Investment is for research in a hospital with the medical device. (And home care geriatric institution)
The research will couple up results with prior research and fine tune device use in appropriate setting. The results will be published in a Journal/s. The device will be CE marked making it directly suitable for the Japanese market. The device is Class 1 in the US which requires a separate filing with the FDA. However, prior information and research results are eligible, and the filing and related administrative costs stand for the expense. The device is sold through wholesalers/distributors in target markets for a % cut of the price. Presence and sales efforts are needed at trade fairs and utilizing new media to pinpoint target areas. The device is of course suited to other markets as well. E.g. China where the CCC certificate is warranted along the lines of the previously stated. Sales efforts are quite standardized throughout and the places and patients from the device's perspective are of course the same everywhere.

Times frame is much dependent on place of research and researcher. Because of this there can be delays because there simply just is not a suitable time slot for the research at the institution or queues. It is not possible to reserve slots beforehand.

Device readied, researcher and research place decided, permits acquired research started, patients acquired (consent acquired), results, possible device tuning tweaks to fit better at the environment, comparison to past results, research paper and publication. Product ready for further implementation and sales. The device: a software and hardware (computer). The device is suited for hospital use before and after as well as in elderly care and home care. One can also add some processes with it that can tackle the recent problems with lapses in elderly care in the Nordics and I believe in many other places as well. The medical device requires a research where the same tests as in many prior researches are conducted so that a red line can be drawn to prior research and a journal publication be had that will facilitate sales. This requires investment and for follow on steps. Sales through distributors and directly. The device can be used by the hospital for patients entering and be extended to patients not in hospital.

All and most problems software medicine tackles have been emphasized even more in the current situation and will be so also after COVID-19 is pushed back. Although software medicine is very much needed today it will heal and support health care, as has been clinically researched, also in the future. Deaths in geriatric care were a problem before the crisis and will be so in the future too where software medicine can lend a hand. The same applies for the store tools which have been honed to be even better after the crisis. Stores have had a different environment to tackle with sometimes less customers buying more. More emphasis on timely service in the store by the staff. New technologies around automated payment functions reducing the need for check out staff. Enhancing the value created for all the store tools. In hospital, institutional, geriatric and home care settings an increased interaction requirement among patient, personnel and staff is reality. Many isolation cases and exacerbated exclusion problems that already are a huge problem in hospital, geriatric and home care have surfaced. Emphasis on how to know the patient in a care situation is worsened with contagion problems. Psychiatric problems for family and patient are exacerbated with further exclusion and not knowing.

Studio Prof. Marchetti, Italy

Funding: € 195 000

marchettidilatometershop.com/en/custom-home

Finalization of the Medusa DMT product, integration of seismic sensors. Product Certifications: ASTM, Eurocode, ISO and TC102 certifications. Field demonstration and scientific validation of Medusa (S)DMT in real conditions in tailing dams in Brazil with Vale S.A. in collaboration with the University of Rio Grande do Sul. This step is propaedeutic to identifying Medusa as standard testing procedure for tailing dams in Brazil, where the monitoring standard for tailing dams is being revised.

The stop due to the COVID-19 crisis caused relevant impacts for the company: Delay and cancellation of orders of several DMT instruments, with an impact of -35% on the revenues for the company in the first semester. Layoff of technical staff and stop of the technical developments planned for the Medusa DMT, which was planned to be concluded by 2020, and shift of 1 year for completion, causing the risk of not being included in the ongoing revision of the standards for tailing dams monitoring ongoing in Brazil. Cancellation of the 6th International Conference on Geotechnical and Geophysical site characterization (ISC 2020) that was planned in Budapest in September 2020, where we had planned to present the Medusa and where we sponsored the “Silvano Marchetti Award” for the most worthy scientific publication on in-situ testing focusing on DMT technology.

The support provided by EIT RawMaterials would allow to recover (and even speed up) the development plan for Medusa, allowing to finalize the development, certification and full demonstration in the field in Brazil by 2020, reaching the market in 2021.

SunCrafter, Germany

Funding: € 199 878

suncrafter.org

The objective of this project is for SunCrafter to build and preserve our pioneer position as an off-grid and sustainable LEV charging provider, and to overcome the setbacks caused by the COVID-19 crisis. We aim to reach complete technology readiness by the end of 2020 so we can sell our first standardized products before the beginning of the next year.

We want to use the economic slowdown caused by COVID-19 to focus on this very relevant business opportunity and be fully prepared for the product launch in 2021. To achieve this in a sprint, we need to re-establish existing employee resources which we were forced to cut down with ‚Kurzarbeit‘. We also opt to hire a micro-mobility expert as COO to accelerate market entry. COVID-19 impacted our business severely in basically all business dimensions. The most established part of our business, event rentals, broke down entirely causing about 100 000 Euro revenue loss this year alone. To deal with the budget losses we had to impose tight ‚Kurzarbeit‘ on most employees and defer important investments in product development and marketing. An important project regarding the sourcing of second-life PV, which we conduct jointly with EIT RawMaterials and Veolia Deutschland, is temporarily stalled due to COVID-19 travel restrictions.

We are determined to turn these impacts into an opportunity for our business by fully focusing on establishing ourselves in micro-mobility charging. We started into this new business sector mid last year and took great steps until customers, investors and suppliers, all affected by COVID-19, temporarily needed to step back. Traction in terms of customer interest, successful prototyping and infield pilot testing shows us that our business proposition has great potential and we want to use the interruption through COVID-19 to accelerate on technology readiness. To maintain and expand our position as market and sustainability pioneer in the micro e-mobility charging, we must complete product development and qualification, create a solid metering and billing model, conduct extensive piloting and potentially protect our intellectual property this year.

Suomen Kiertoketju, Finland

Funding: € 200 000

kiertoketju.fi

Kiertoketju is a Finnish circular economy company developing a new pyrolysis technology to produce sustainable new recycling concept for used tyres and plastic waste that cannot be mechanically recycled. Our aim is to create a closed circle to tyre and plastic industry by turning rubber and plastic waste to recovered oil and carbon black to be used as new raw materials replacing traditional fossil ones in tire and plastic product manufacturing. With this project the aim is to accelerate the customer validation and to carry out the pilot testing of our new products. Our company is building the first production scale plant based on our own pyrolysis technology. The Start Up of the plant was initially scheduled to be completed during April 2020. Because of the COVID-19 crisis delivery of some critical parts and instruments delayed and part of the staff and mechanics had to leave the site because of the risks caused by COVID-19.

The estimation is that the start-up delay is at least three months and that has a negative impact to our budget. Because of the situation all the focus has been in reorganization of the site actions and the communication with the potential customers has been interrupted. With this Project the aim is to accelerate the customer validation and to carry out the pilot testing of our new products.

SusPhos, The Netherlands

Funding: € 199 909

susphos.com

We currently have the designs/ flow sheets ready for building the pilot plant to upscale towards >100 kg/day. Having this pilot up and running is the main aim of the project, therefore the planned activities are: Building the pilot plant, applying for a new patent to secure our knowledge, testing new starting materials (new waste streams), moving the installation to pilot location, testing the pilot scale and selling the first samples. SusPhos invested heavily in the preparation of the construction phase by renting the construction hall, buying the equipment, hiring a process engineer to start the construction of the pilot, right before COVID-19 crisis. Consequently, higher running costs and a significant financial gap, without any progress being made in the pilot construction. This resulted in the fact that we have insufficient funds for building and running the pilot plant solely on current resources. With the funding of EIT RawMaterials Booster, we can bridge this gap and be investor-ready by end 2020.

Talleres Felipe Verdes, Spain

Funding: € 186 000

verdes.com

The objective of the project is to design and rollout an agglomeration by extrusion machine capable of working with a wide range of waste materials. The scope of the project spans all the way from initial proof of concept to the manufacturing of the final machine. Throughout this process, the machine will be tested and redesigned to meet strict quality requirements. The EIT RawMaterials Booster in response to COVID-19 crisis financial support will allow Verdés to overcome the current disruption by boosting an ongoing diversification and internationalization process. Verdés was among the first companies in Spain to enter lockdown. As a consequence, the production and delivery of orders has suffered a considerable deceleration and companies are more reluctant to sign new contracts because of increasing global uncertainty.

talpasolutions, Germany

Funding: € 200 000

talpasolutions.com

Develop an energy management system for the heavy industry focussing on mobile machines to comply with ISO 50001:2018. We notice about 40-55 % less turnover as forecasted. The funding would help to generate a new product which leads to additional revenue streams.

Teimas Desenvolvimento, Spain

Funding: € 112 500

teimas.com

ZERØ is a digital platform for resource and waste management. It enables the unification of operational and document management data, improves traceability and information flow, generates exportable reports, displays progress indicators and speeds up sustainability strategies. ZERØ is aimed at any company that wants

to trace the lifecycle of its raw material or waste production. The COVID-19 crisis is having a major impact on Teimas. Spain has been one of the most affected countries in the EU with a remarkable reduction in the industrial production sector in which our customers are located. Some figures:

1. Teimas commercial activity (prospecting and leads contacting) decreased 85%.
2. Estimated revenues at the end of the year are 25% lower than targets set for 2020, returning to the income levels of 2018.
3. On the other hand, the company's workforce has grown by 30% since the first of January.

This project will help to incorporate several competitive features based on technology (blockchain) and aligned with the green deal recovery plan, which advocates the digitalisation and decarbonisation of the European economy.

Teollisuuden Vesi - Industrial Water, Finland

Funding: € 151 875

teollisuudenvesi.fi

Our business concept includes two levels:

- Continuous pilot experiments with high water recovery rate in real-life process environment (technology usability). Also, final wastewater fraction (= concentrate) management is included and zero liquid discharge (ZLD) options such as evaporation and crystallization are tested in laboratory scale. The main goal of both pilot and laboratory experiments is to verify and develop solutions for mine water recycling and wastewater management issues.
- Water balance model development for water process design. Instead of state-of-art Excel based water design calculations, mine water design of a planned or operating mine can be done more efficiently and accurately. With water balance model, development issues can be detected and verified in early state. Main impact due to COVID-19 has been the clear decrease of the end-user's willingness to continue water recycling programs and research and development work including pilot experiments due to the global decrease of consumption and economy. The budgets are more limited. Additionally, some of the projects already agreed have been postponed decreasing our ability to continue the normal operations and activities within our own development projects. This makes us more difficult to continue our normal work and decrease in revenues are expected to be at the level of – 40...50% during autumn 2020.

Post-crisis reality will benefit a lot from the work designed here as the tests will increase our competition level, knowledge of the different unit processes will increase and some of the end-users see our work in practice. This makes us possible to offer larger work packages during the following year, gives us more information on the water and material balance calculations and makes us stronger in terms of expertise among the recirculation techniques.

ThingWave, Sweden

Funding: € 96 045

thingwave.eu

We will design, build and lab test a sensor prototype. Then revise the design and prepare for the first field test. After another revision, we will perform a second field test. Following that, we will write a report. In parallel with the technical work, we will perform a patent investigation and a market analysis. ThingWave

had 5-6 field trials in the loop for 2020. Four in Australia, one in Finland and 1-2 in Sweden. Due to lockdown procedures in all mining companies, we have been forced to postpone all field tests. This will drastically reduce our possibilities to make business. This project will enable us to work on a business idea that we have had for a while, that can increase safety for workings and minimize unplanned disruptions in the production.

Timegate Instruments, Finland

Funding: € 200 000

timegate.com

PROBE-PRO project focuses on overcoming the key market barriers in commercialisation and scaling-up our business, filling the technology gaps and achieving the overall readiness for process monitoring service business.

Funding will be used for lab experiments to determine the influence of particle size and solid content changes on the Raman signal intensities. Based on that data, we'll make a tailor-made process probe design, PROBE-PRO, for the flotation process integration. Also, will design and implement effective communication and dissemination campaigns to adapt to this new COVID-19 situation with travelling and meeting restrictions. This mean more remotely available materials will be produced. COVID-19 has postponed all our on-site demonstrations, system installations and pilots, that had been agreed to be performed during this year. Mining companies are protecting their production personnel and therefore all site visits and pilots have been postponed or cancelled.

Tracegrow, Finland

Funding: € 200 000

tracegrow.com

The current business opportunity is to provide new micronutrient fertilizers made from suitable trace nutrients recycled from nutrient-rich industrial waste streams and to develop a recovery process for their recycling and reuse. The proposed project will develop new trace nutrient products (e.g. Cu, Mo, B) and validate them for fertilizer use in organic and conventional farming. As an example, fibreglass waste contains boron in the form of borax; cement copper is formed as a side stream during leaching of nickel and zinc concentrates, and the steel industry utilizes molybdenum for steel hardening. These metals could be separated from the corresponding waste-/side-streams by using acid-base leaching and solution purification.

Our target is to expand Tracegrow's product portfolio Intellectual Property (IP) portfolio in order to respond to customers' demand and ensure international growth. Tracegrow has achieved a leading position in recycling alkaline batteries and in developing ecological agricultural fertilizer, manufactured using a patented method to extract and reuse zinc and manganese from used alkaline batteries. We have invested in building our first pilot factory in Kärsämäki, Finland.

We have achieved the milestones which enabled attracting investors via a crowdfunding platform in Finland, and thus providing the financial runway for ramping-up production of ZM-Grow, the first zinc and manganese micronutrient fertilizer manufactured from recycled metals derived from used alkaline batteries, and the first of its type to be certified for sales in the European Union for use in organic and conventional farming. The current COVID-19 crisis, however, has brought financial liquidity challenges, which in turn are negatively affecting the commercialisation roadmap for our current product portfolio as well as the necessary development of new fertilizer products that use nutrient-rich industrial waste streams. This expansion of the

product and IP portfolio is a necessary milestone that we must achieve in order to attract the next round of market-based funding for international growth.

Widefind, Sweden

Funding: € 200 000

widefind.se

Prepare expansion outside of Sweden by creating a standardized test kit that we can offer to customers that want to evaluate our positioning solution for underground mines. We believe that such a test kit, which enables us to move through the early stages of a sales process without physical meetings, is of great importance in a post COVID-19 world. The impacts on Widefind from the COVID-19 pandemic are in terms of delays, lost revenue, and increased costs. Due to the pandemic, the pilot projects we are running with our partners in industry grinded to an almost complete halt for some time. Even though we are now making progress on all our projects, we are doing so at a very limited phase since we have to rely on others to do the work, we usually do ourselves. For example, obtaining a high-quality data set from a test site, something that would normally take us a day, took us two months during current circumstances.