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eit
Digital

2010-2020

CELEBRATE
INNOVATION

ANNUAL
REPORT
2020

EIT DIGITAL FOR BUILDING STRONG EUROPEAN DIGITAL VENTURES

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2010-2020 CELEBRATE INNOVATION

CONTENTS

FOREWORD

The year 2020 was truly a special one. For EIT Digital, as for many other organisations, the COVID-19 pandemic had a significant impact on our operations. It required EIT Digital to adapt its way of work by moving almost fully to online. Fortunately, our expertise and infrastructure allowed us to quickly turn meetings, events, and education programs from on-site to digital.

In this way we were able to keep most of our operations run smoothly and successfully facilitated interaction with our ecosystem and external stakeholders remotely. For us and our partners, this was a big challenge, yet the results demonstrate that it was mastered in an agile and responsive manner.

The year was, however, even more special as we celebrated our 10-year Anniversary. In 2010, EIT Digital was founded as one the first EIT Knowledge and Innovation Communities and has since then been on a remarkable journey of growth and evolution. We celebrated it with our Makers & Shapers series, a great online anniversary event, and the publication of our 10-year Anniversary Book 'Celebrate Innovation'. The EIT community prepared this past

year for the transition from Horizon 2020 to the new Horizon Europe Research and Innovation programme. Even though circumstances related to the EU Recovery Fund caused some delays, we were happy to see an agreement reached before the end of 2020 that allowed the EIT and its Innovation Communities to proceed with the transitional arrangements.

The Supervisory Board welcomed new members, and the General Assembly in September renewed several member mandates, including my own. The work of the Supervisory Board focussed this year on further developing the organisation's long-term strategy for enhanced financial sustainability.

EIT Digital made significant progress towards entrepreneurship and venture creation. This will also be the core focus for the years to come, shaping the evolution of our ecosystem and securing the sustainability of the organisation. Next to that the Supervisory Board worked on the evolution of the partnership and ecosystem, the COVID-19 response including the specific EIT crisis response actions, and the transition to Horizon Europe.

EIT Digital supports the European Commission and EU Member States in their endeavour towards *A Europe fit for the digital age* which aims to make the rapid digital transformation work for people and businesses. The Commission is determined to make this Europe's "Digital Decade" and has launched several initiatives to support this important goal. Digital Markets Act and Digital Services Act shall

provide the regulatory playing field on which consumers are protected and companies can compete on equal terms.

The Digital Compass on the other hand translates the EU's digital ambitions for the next ten years into concrete targets, setting out a European way for the digital decade. Together with the EU's Digital Education Action Plan these initiatives are a clear indicator for the substantial efforts to boost the digital transformation of Europe. EIT Digital is at the heart of this strategy and will be an active player to achieve these goals!

I would like to extend my sincere gratitude and acknowledgement to our team, the EIT Digital partners, all students and entrepreneurs for our joint endeavour in 2020. This was a year full of adoption, learning and delivering under circumstances only a mission-oriented organisation as EIT Digital is able to cope with.

Linnar Viik
CHAIRMAN
EIT DIGITAL SUPERVISORY BOARD

CEO **STATEMENT**

Our motto for 2020, 'Include and Succeed', is present in all aspects of our work. As a pan-European ecosystem, we focus on including new partners ready to join our innovation and education activities. As a result, we further expanded our ecosystem, both in numbers of partners and office locations, which helps to increase the scale and impact of our activities.

Our innovation activities target digital solutions and ventures that address societal challenges in an inclusive manner, embedding European values such as privacy; our education activities are inclusive by covering a wide range of topics and addressing a wide audience. The success of our approach is demonstrated by a growing community and enhanced delivery with strong impact across Europe and increasingly beyond.

Obviously, 2020 was characterised by the impact of COVID-19 on our operations. Due to restrictions on mobility and assembly, many activities and events were in short time moved online. In an impressive manner, the organisation and our partners managed to adapt swiftly and agile to the new circumstances. Business continued without interruption and, albeit undesired, the effects of the pandemic mobilised the strengths of our ecosystem and motivated all of us to discover and implement new methods of collaboration.

These challenges apart, 2020 was also a year to celebrate! Ten years ago, EIT Digital saw the light of day and set out on a journey of growth. Growth in terms of the community, growth in terms of delivery on innovation, entrepreneurship, and talent, and finally growth in terms of impact through our thought leadership. To commemorate our 10th Anniversary, EIT Digital invited its partners and friends to an online celebration event and surprised everyone with our 10th Anniversary Book 'Celebrate Innovation'. The book describes how EIT Digital over the past decade became the largest digital innovation ecosystem in Europe, delivering on digital entrepreneurship, innovation, talents, and skills.

Our anniversary year also marked the launch of the Makers and Shapers journey, a series of video conversations with captains of industry and high-profile start-up executives (the Makers) on the one hand and policymakers from EU Institutions and Authorities (the Shapers) on the other. In our series, they share their vision on key areas of digital innovation and the way forward to a strong digital Europe. In this way, EIT Digital contributes to thought leadership on a strong digital Europe. In this context the report series that started in 2019 was continued in 2020 with two new reports, one on European Digital Infrastructure and Data Sovereignty and one on A European Approach to Artificial Intelligence.

ECOSYSTEM

After strong growth in 2019, our increased delivery, impact and recognition led to an even stronger expansion of our ecosystem in 2020. The total number of partners increased by around 40 to more than 300. The launch of our new Antwerp Satellite will help us to deepen relations with the Belgian digital ecosystems. Preparations for the establishment of a Satellite in Estonia were concluded with an expected launch early 2021.

We completed the transformation of the ARISE Europe program with the full integration of the RIS countries (in Southern and South-Eastern Europe, CEE and the Baltics, plus Portugal) in the structure of our core ecosystem and their allocation to specific Nodes. This will help us to further intensify our engagement with innovation stakeholders in this high potential region.

Additional emphasis was given to our collaboration with fellow EIT Innovation Communities. The joint EIT Silicon Valley Hub, albeit affected by COVID-19, became fully operational this past year. We are happy with the co-location of our Climate KIC colleagues joining us in London. Worth mentioning are the Cross-KIC activities, including that on the Impact of Artificial Intelligence that will be continued throughout 2021.

Recognizing our important role as ecosystem facilitator, EIT Digital mobilised its partner network to join up with EU governments and the European Commission's DG CONNECT to support the establishment of Digital Innovation

Hubs across Europe. These Hubs are one-stop shops helping companies with their digital transformation, innovation and business.

INNOVATION AND ENTREPRENEURSHIP

Capitalising on our Stand up – Start -up – Scale up model we accelerated our innovation and entrepreneurship activities, concentrated in our five strategic areas Digital Cities, Digital Finance, Digital Industry, Digital Tech, and Digital Wellbeing. An impressive total of 69 start-ups was created and 78 new products launched. They make an important contribution to the sustainability of EIT Digital. As a combined result of our Innovation Activities and the Venture Program, we saw in 2020 an impressive growth of our equity positions to 123.

Despite the impact of COVID-19, forcing us to move the entire process online, the call for proposals to build our 2021 activity portfolio attracted 179 innovation activity proposals, an increase of 17 % with respect to last year's call. It demonstrates the attractiveness of our community for innovators and entrepreneurs and provides the basis for a strong innovation activity portfolio in our 2021 Business Plan.

The COVID-19 pandemic led to accel-erated digital transformation and new challenges, calling for new innovations and new champions to emerge. For example, our health assistant robot SARA got a boost resulting from increased workload on care in elderly homes. Another great example is a 3D printed remote monitoring device that can measure vital signs of corona patients. The device enables nurses to safely monitor multiple patients at the same time. This innovation was developed by a group of EIT Digital Master School students, who won a large EU-run hackathon, joined up with EIT Digital partners, received our support to develop their Minimum Viable Product and founded their start-up Entremo to hit the market. And there were many more, including COVID-19 tracing with physical tokens. Following a public call, EIT Digital received more than 60 expressions of interest, leading to the selection of four European teams to work on concrete solutions. Within

a few months, the teams developed market-ready devices and are engaged in various initiatives to bring their physical COVID-19 tracing tokens to the market.

EIT Digital-supported numerous innovation activities in our five strategic areas. We like to highlight two examples related to last mile autonomous delivery (LMAD) and point-of-sale payment solutions. LMAD is an excellent example to illustrate how swift and successful we turn innovation into market-ready solutions and ventures. LMAD developed a software platform to operate multiple types of autonomous delivery robots (ADRs). LMAD successfully operated its platform at the Nokia Campus near Paris and the Aalto University Campus, near Helsinki. Pilots included ordering of groceries online and having them delivered by LMAD's autonomous delivery robot, as well as the autonomous delivery of gifts for a holiday charity campaign in Helsinki. A local K-Market grocery store and DB SCHENKER were partnering in some of these pilots.

PeasyPay is another activity that was successfully launched from the EIT Digital ecosystem. Their solution allows customers to pay by just showing their face and taking a picture of the palm of their hands. The system was first rolled out in Budapest and also piloted in Guadalajara, Spain. Slovenia and the UK will follow.

Our Accelerator adapted swiftly to the new circumstances and was able to support our portfolio scale-ups in a hands-on way. Thanks to our distributed team of business developers and fundraising experts and their pan-European network of customers and VCs, we could help our scale-ups to meet the right international customers and investors. An absolute success story is SideKick, a digital therapeutics scale-up for which €17m was raised in Series A funding. The EIT Digital Accelerator was further strengthened by improving the process for scouting and recruitment.

In October, 28 teams from Central and Eastern Europe, the Baltics and Southern Europe graduated from the 2020 EIT Digital Venture Program. They received business mentorship and initial financial support. Among the ventures launched, Polish payment start-up Restpay stands out with a Business

Angel investment received directly at the end of the program.

In mid-November, the EIT Digital Challenge finals awarded the 5 best European digital deep tech scale-ups of 2020. A record number of 403 scale-ups from 32 countries applied, representing a 44% growth compared to 2019. Almost 40% of applicants, 55% of the 20 finalists, and 3 out of 5 winners (that is 60%) featured women as founders or C-level executives. A testament to EIT Digital's efforts to support European female entrepreneurs.

Finally, EIT Digital ran 6 DeepHacks across our ecosystem. Sticking out was the DATA against COVID-19 DeepHack, where 20 teams were selected from a field of 145 projects and a total of 318 registrants. The winning teams also received European innovation funding.

ENTREPRENEURIAL EDUCATION

EIT Digital's education and training programs were also affected by COVID-19 and related mobility and assembly restrictions. Most notably, the Master School experienced a negative effect on the number of applications for the 2021 cohort.

All Master School and Summer School programmes were moved successfully to online formats and distance learning. These adaptations were without doubt demanding for students, learners, and course providers, but also an opportunity to try new methods and skill up on new ways to collaborate and work remotely in teams. More than 400 participants from all over the world participated in our 14 Summer Schools and deep dived into 50 real-life business cases provided by EIT Digital partners. Their feedback was overwhelmingly positive!

Also, the Professional School suffered from the COVID-19 pandemic and related restrictions. We have been stepping up the school's structure and portfolio but struggled with the impact of COVID-19. The necessary changes to online-only formats reduced the number of participants substantially.

Finally, in 2020 we offered 43 MOOCs via the online platform Coursera, counting more than 500,000 visitors, close to 140,000 unique learners and over 19,000 course completions.

THANK YOU

Due to the COVID-19 pandemic, 2020 has without doubt been the most challenging year for EIT Digital. It required fast action and agility to adapt to unprecedented restrictions including travel bans and lockdowns. At the same time, it was the year of our 10th anniversary which requires celebration of the journey so far and reflection on the journey ahead. We could not have imagined a bigger contrast. Both extremes showed the strength of our organisation, partnership, and ecosystem. We acted quickly to secure the continuation of our work under difficult COVID-19 restrictions and kept delivering and impacting the world with our innovations and talents. At the same time, we showed our ability to reflect, anticipate, and contribute to the debate on a strong digital Europe. EIT Digital has shown its resilience. This is thanks to the contribution of everyone in our community. I like to express my deepest gratitude to everyone in the EIT Digital organisation and partnership. In these unprecedented circumstances all of you gave what it takes to sustain EIT Digital. This not only makes me proud to work in our organisation, but also gives me strong confidence in the next decade for EIT Digital.

Willem Jonker
CEO EIT DIGITAL

HIGHLIGHTS 2020

PAN-EUROPEAN
ECOSYSTEM

EIT Digital has grown its ecosystem to 300+ partners. More than 40 new partners joined in 2020.

ENTREPRENEURIAL
EDUCATION

More than 280 new students enrolled in EIT Digital's Master and Doctoral programmes. In total more than 2,560 students have enrolled since 2011.

EIT Digital executed 14 Summer Schools with over 400 participants.

EIT Digital's Massive Open Online Courses (MOOC) on Coursera are increasingly popular attracting close to 140,000 learners.

INNOVATION AND
ENTREPRENEURSHIP

69 new companies created as a result of innovation activities and 78 products and services commercially launched.

68 scale-ups supported by the EIT Digital Accelerator. More than €100M total capital raised for scale-ups.

403 innovative companies from 32 countries applied to the EIT Digital Challenge.

6 DeepHacks delivered, with notably the DATA against COVID-19 hack featuring 20 teams from a field of 145 projects and 318 registrants.

28 teams from Central and Eastern Europe, the Baltics and Southern Europe graduated from the EIT Digital Venture Programme.

STAKEHOLDER RELATIONS AND THOUGHT LEADERSHIP

In support of EIT Digital's mission to support the digital transformation of Europe and contribute to a strong digital Europe, EIT Digital's leadership engages in strategic stakeholder relations and contributes to the public debate on digital issues with a number of thought leadership activities. This engagement programme enhances the organisation's positioning as influencer and catalyst between industry, research, business and public institutions.

MAKERS & SHAPERS

The importance of a strong digital Europe is widely acknowledged and best achieved by Makers (industry) and Shapers (authorities) working together to create a sovereign European digital reality with products, services and regulation that serve citizens, respect European values, drive innovation and provide equal opportunity for everyone.

As part of its 10-year anniversary, EIT Digital launched the Makers and Shapers journey, featuring thought leading conversations with captains of industry, high-profile start-up executives, and investment experts (the Makers) as well as EU and national policymakers (the Shapers). In this series, they share their vision on key areas of digital innovation and the way forward to a strong digital Europe.

Makers and Shapers shall inspire entrepreneurs, and engage innovators, investors and policy makers in Europe's effort to be a major player in digital innovation. Our video journey is a testimony for the need to overcome fragmentation in Europe. It is a manifestation of the strength of collaboration, gives a sense of belonging to a pan-European innovation ecosystem and strengthens confidence in a strong digital Europe.

From the Makers' side, our journey featured amongst others Philips CEO Frans van Houten, Siemens CEO Roland Busch, fmr NOKIA Chairman Risto Siilasmaa, KONUX CEO Andreas Kunze, and Ferrovial CEO Ignacio Madridejos. The Shapers' side was represented by amongst others Alain Godard, CEO of the European Investment Fund, Roberto Viola, European Commission Director-General for Communications Networks, Content and Technology, Jean-Eric Paquet, European Commission Director-General for Research and Innovation, Anne Bucher, at the time European Commission Director-General for Health and Food Safety, MEP Eva Kaili, Chair of the European Parliament Panel for the Future of Science and Technology STOA, and MEP Cristian-Silviu Bușoi, Chair of the European Parliament Committee on Industry, Research and Energy.

The series will continue in 2021 with an even stronger focus on start-up investment and venture creation.

Philips CEO Frans van Houten

Fmr. NOKIA Chairman Risto Siilasmaa

Siemens CEO Roland Busch

MEP Eva Kaili

POLICY REPORTS

In the context of its activities in strategic innovation of Europe, EIT Digital decided to launch a series of studies focusing on main policy challenges emanating from digital transition of Europe. The studies follow a scenario-based approach to structure and assess the potential impact of specific policy measures and provide business and policy decision makers with instruments for the development of digital policy.

The first report on the Digital Transformation of European Industry was published already in 2019. It shed light on the serious challenges the digital transformation of industry puts to European economies and social welfare models. In order to support an informed debate on how to address these challenges, the report presented scenarios reflecting different labour and taxation policy options, and analysing the impact on economic growth, jobs and social cohesion of Europe's economies and societies.

Our second report on European Digital Infrastructure and Data Sovereignty provides an overview of policy motivations, trends, instruments and the roles of various actors in defining the perception of and perspectives for Europe's digital sovereignty. As a bold conclusion, through coordinated action between European Commission and EU Member States, Europe is called upon to better connect makers (industry) and shapers (authorities, citizens) to create the right policy instruments for a sovereign European digital reality with innovation and regulation that respect European values and rights while creating equal economic opportunity for all actors.

This third report addresses the European Approach to Artificial Intelligence. The report explores the impact of Artificial Intelligence in general as well as in more specific application domains strategic for Europe: Health, Manufacturing, Climate, and Mobility. In all of these areas, it identifies general and sector-specific opportunities for and concerns about the further deployment of AI and concludes with an assessment addressing the impact on innovation potential, fairness, trust, and growth opportunities.

SPEAKING OPPORTUNITIES AND STAKEHOLDER EVENTS

International events, seminars and conferences are important platforms for EIT Digital to demonstrate thought leadership, present our success stories and inform about our activities with the goal to promote and enhance the footprint of EIT Digital in the innovation market and to support the long-term sustainability goals.

The year 2020 obviously changed the character of this engagement. Mobility and meeting restrictions caused by the COVID-19 pandemic led to a by and large complete move from on-site to online events, both for EIT Digital's own arrangements and our participation in third party events.

The move to online-only was challenging, but also presented new opportunities to engage with our stakeholders. Online formats impose lower logistical hurdles and can be planned with shorter notice. No travel and accommodation are included, there is hardly any time spent on waiting for interventions, and the potential audience reach is often greater because online events are not restricted to a specific geography.

Excellent examples of engagements in third party events were the 2020 EU Research & Innovation Days and the European Innovation Summits organised by Knowledge for Innovation (K4I), but also the Mind the Chat fireside talk with Silicon Valley-based organisation Mind the Bridge, or a webinar presentation to United Nations information management experts by CEO Willem

Jonker on Digital Infrastructure and Data Sovereignty. Many of these formats would have been difficult to contribute to if they were held as physical on-site events. Online allowed for a more flexible approach and more diversity in character and size of the events we contributed to.

CELEBRATE INNOVATION – THE EIT DIGITAL 10-YEAR ANNIVERSARY BOOK

Launched in 2010 as one of the first wave EIT KICs (Knowledge and Innovation Communities), the EIT Digital community set out on a journey of growth. Growth in terms of the community itself, growth in terms of delivery on innovation, entrepreneurship, and talent, and finally growth in terms of impact through its thought leadership. Our Anniversary Book tells the story of how EIT Digital over the past decade became the largest digital innovation ecosystem in Europe, delivering on digital entrepreneurship, innovations, talents and skills.

EIT Digital matured against the background of a fast-accelerating digital world and a growing focus on entrepreneurship in Europe. Complementing the strong European research base, this entrepreneurial mindset will strengthen Europe's position in a digital world driven by data, platforms, and the network economy. Creating a Strong Digital Europe will safeguard European values by being inclusive, fair, and sustainable.

Our 10-year Anniversary Book, presented in the autumn of 2020, consists of three parts. It starts with describing the trends of the first decade of this century – the age of networks – preceding the creation of EIT Digital. It follows describing the journey of EIT Digital in the second decade – the age of platforms – against the background of the fast-developing digital world. The final part is an outlook to the third decade – the age of miniaturisation, identifying the main trends and outlining the envisaged further development of EIT Digital.

Celebrate Innovation – the EIT Digital 10-year Anniversary Book – also demonstrates how active the organisation and its representatives have been to engage with key European policymakers and stakeholders on questions that concern the digital transformation of Europe, competitiveness of its economy, and impact of the digital transition on Europe's societies and citizens.

EIT Digital considers these efforts an important element of its overarching mission: to create a strong digital Europe that is inclusive, fair, and sustainable.

Strategic
focus areas

EIT Digital has identified five focus areas that are strategic for Europe, with significant European relevance and leadership potential. They are where the organisation concentrates its investments: Digital Tech, Digital Cities, Digital Industry, Digital Wellbeing and Digital Finance.

These strategic focus areas enable EIT Digital to focus its expertise, critical mass and ecosystem – thereby increasing its impact. Each focus area is described as follows:

Digital Tech covers secure Internet of Things (IoT), data sovereignty and artificial-intelligence-based solutions. This core area addresses digital technologies that are the basis of the deep digital transformation of our economy and society. Europe needs to stay in the lead in the areas where it is currently strong (networking, 5G, IoT), play a leadership role in digital's next platform revolution (artificial intelligence) and establish broad trust in digital (cybersecurity, privacy).

Digital Cities is about supporting the sustainability of European cities by modelling the city as a data platform. These solutions address urban mobility, citizen inclusiveness and engagement, and city safety and involve the various city actors – government, city service providers, industry, citizens – making our cities participative, liveable and sustainable.

Digital Industry addresses the sustainable digital transformation of industry, from production to logistics to retail, based on data-platform solutions. Indeed, within the value chain, a large amount of data and knowledge is produced, captured and shared for digitising manufacturing, production or logistics processes, or consumer activities. This data is key in creating systemic changes in the market and introducing new innovation affecting the whole business domain.

Digital Wellbeing covers solutions for improving quality of life through sensing and data analysis. Slowing down healthcare costs is a key driver for innovation in the health domain. The objective is to lower the demand for treatment and long-term care, enabling young people, working professionals and the elderly to maintain a good quality of life.

Digital Finance is about building sovereign payment solutions in Europe. This area leverages technologies that enable transparency, efficiency, security and trust in financial transactions. It relates to the retail banking, insurance, asset management and corporate financial services industries.

The impact of EIT Digital is best understood by considering our pan-European programmes and their contribution to the focus areas.

The EIT Digital Entrepreneurial Academy produces T-shaped entrepreneurial digital talent focused on innovation through a blended-education strategy that includes a Master School, an Industrial Doctoral School and a Professional School, aligned with the focus areas.

The innovation pillar is organised in a funnel. At the heart of this funnel is the EIT Digital Innovation Factory. It co-invests in the market uptake of deep tech (sophisticated digital technologies rooted in research) increasingly through entrepreneurship in each of the focus areas. Other programmes such as the RIS Venture Program and the DeepHack complement the funnel, aligned with the focus areas.

The EIT Digital Accelerator is the last phase of the innovation funnel and provides growth support for European tech scale-ups by helping them secure international customers and raising capital. These scale-ups operate in markets aligned with our focus areas. Within the Accelerator, the EIT Digital Challenge is established as the flagship European competition for digital deep tech scale-ups.

DIGITAL TECH · DIGITAL CITIES · DIGITAL WELLBEING · DIGITAL INDUSTRY · DIGITAL FINANCE

Innovation

At EIT Digital, the innovation pillar focuses on building and scaling deep tech ventures in our strategic focus areas, an integrated effort captured in the "standup, startup, scaleup" innovation funnel (figure 1 hereafter). The Innovation Factory is at the heart of this funnel and invests in pan-European entrepreneurial teams together with EIT Digital partner organisations to build digital innovations and new ventures in one of our strategic focus areas.

Innovation activities bring together expertise from the EIT Digital ecosystem with partners contributing technology, talent, business models, investments, and channels to market. Activities deliver innovations to market through product launch and venture creation. The focus is on business impact as well as contribution to the financial sustainability of EIT Digital. The Innovation Factory is a flagship place for organisations and individuals to create innovations and launch deep tech ventures in the digital space in Europe.

In 2020, the Innovation Factory supported a total of 66 innovation activities in our five focus areas, launching 78 products and creating 33 start-ups, compared to 14 start-ups in 2019 – a result of our increased focus on entrepreneurship. In this exceptional year, we deployed the specific EIT

Standup
Technology/Market selection
Team creation

Startup
Venture/MVP launch
Market Entry
Seed investment

Scaleup
Customer acquisition
Series A-B investment

DeepHack
Brokerage events
Standup events
I&E education
Summer schools

Innovation Factory
RIS Venture program
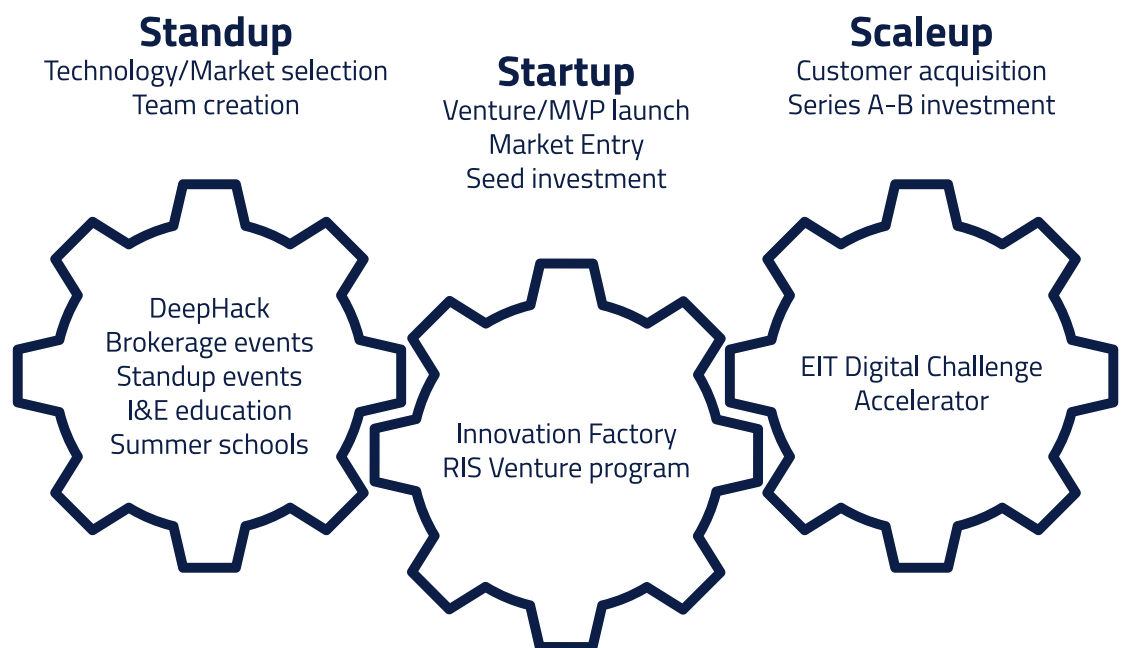
EIT Digital Challenge
Accelerator

Figure 1: The standup, startup, scaleup innovation funnel

Crisis Response Initiative within the Innovation Factory, in order to support innovators and entrepreneurs during the pandemic. Within this effort, we received over 250 applications from all over Europe, and we selected and supported 13 entrepreneurial activities specifically to fight COVID-19 (including four activities focused on contact tracing using physical tokens), as well as 16 ventures.

The Innovation Factory is complemented by the RIS Venture Program in the start-up phase. As preparation for the start-up phase, the stand-up phase includes the DeepHack, matchmaking events and some of our education programmes. The scale-up phase takes over after the start-up phase and is centred around the EIT Digital Accelerator for scaling ventures (figure 1).

Specifically tailored to European emerging markets, the RIS Venture Program supports entrepreneurial teams in the digital space from 20 European countries to finalise their MVP, start their venture and raise funds. In 2020, five regional editions were held – Baltics and Ukraine, Poland Czech Republic & Slovakia, West Balkans, East Balkans, Portugal & Malta – attracting a record-breaking total of 302 applications.

After careful selection, EIT Digital supported the creation of 28 deep tech start-ups. As part of the programme, eight of these ventures successfully raised €400,000 in seed funding from private investors.

The DeepHack is an open innovation event in challenge (hackathon) format. It leverages the EIT Digital ecosystem and focuses on solutions for hard-to-crack deep tech problems and on building ecosystems around a technology. In 2020, six DeepHacks were organised by EIT Digital, all of them in an online format: Data Against COVID-19, From Farm to Fork, Data for Urban Logistics, Open BIM, Mass Customisation and 3D Printing and Digital Technology for Charities.

These events attracted 298 participants (including 71 EIT Digital students) from 38 different countries. Several of the winning teams went on to be supported by the Innovation Factory.

As a well-connected organisation, in 2020, EIT Digital was involved in Horizon 2020 innovation projects aligned with our strategy.

- *MIDIH* created a one-stop shop of services for SMEs by developing a platform that connects manufacturing Digital Innovation Hubs to offer cross-border services, with EIT Digital as the coordinator.

- A coordination and support action (CSA) of the Big Data Value PPP, *BDVe* created a marketplace for the solutions that were developed in the different PPP projects.

- *QU4LITY* is creating an autonomous quality model and market platform to meet the Industry 4.0 Zero Defect Manufacturing challenges, tested through 14 pilots and with Open Call experiments.

- *AI4EU* is developing a European platform for artificial intelligence that will act as a broker, developer and one-stop shop providing and showcasing services, expertise, software, data, computing resources and access to funding.

- *Concordia* is addressing the fragmentation of security competence by building a community of pan-European Cybersecurity Centres. Together with the partners, EIT Digital is developing professional courses in Cybersecurity.

Education

Education is an innovative concept that evolves over time. 2020 was a clear example of that, as education quickly adapted to the challenging situation unfolding around the world. The pandemic also demonstrated the need for and lack of skilled digital talent. EIT Digital was able to adapt its education programmes to mitigate the challenge.

In 2020, all our education programmes switched to online, but still included the elements that provide the unique approach of EIT Digital's education. These elements are based on the connection of knowledge, technology, real business challenges and people to create the right entrepreneurial mindset to foster the digital transformation of Europe. The concept of 'Open Education" is becoming more relevant, and EIT Digital is implementing it, sharing the knowledge of our network of partners, academia and industry, with our students.

EIT Digital is focused on connecting innovation with education, merging activities that provide the best entrepreneurial education model. Our internship programmes, as well as the use of real-life business case studies in our education programmes, are two examples of the integration of education and innovation.

In 2020, the EIT Digital education model was unique in its four schools – the Master School, Doctoral School, Professional School and Summer School.

2020 was the year in which the EIT Digital Entrepreneurial Academy demonstrated its ability to provide one of the best innovative, high quality-education offers in Europe under the difficult circumstances of the pandemic.

In 2020, in spite of the challenges caused by the global pandemic, the EIT Digital Master School managed to consolidate the number of students at the same level as the previous year. Meanwhile, the school has been taking steps to become more financially sustainable and less dependent on public funding. As is customary every year, the programme portfolio was reviewed. Two new programmes (Digital Manufacturing and FinTech) were successfully launched, enrolling 15 students in the first year of their operation. These programmes enable easier alignment between the KIC's strategic focus areas and education activities and attracted two new universities to the school: the University of Bologna, Italy, and TalTech (Tallinn University of Technology), Estonia. Additionally, the work done to transform the programmes into blended education continued.

The EIT Digital Industrial Doctoral School (IDSL) fosters structured and strategic university-industry collaboration through the realisation of applied research doctoral projects that help companies solve real-life challenges, leading to innovative products. The school has been a tool in providing Education-Research-Business (ERB) integration. Thesis topics integrate research and innovation. The IDSL programme ensures greater impact and ERB integration, but requires full alignment with EIT Digital's focus areas, local academic requirements and, last but not least, industry interests during the formulation of thesis proposals.

The EIT Digital Professional School provides high-quality professional education to service the demand for upskilling professionals in using emerging technologies for their businesses. All executive courses are themed around one or more Focus Areas where EIT Digital sees significant societal and industrial challenges and opportunities for Europe to take a leadership position in the global digital economy. Beyond the practical entrepreneurial skills, the ambition is also to further foster innovation skills and business awareness among participants: learn to understand how the process of digital

transformation works; understand how IT technology may impact the market and change business models.

All courses in the portfolio combine an introduction to the main concept of digital technologies with practical insights that can be applied in the workplace. In 2020, the Professional School introduced four new market-relevant blended courses. They complement the existing line-up of seven courses with a new and complementary curriculum. The proposed blended learning approach immerses participants in a rich experience, combining face-to-face in-class interaction with the most diverse online opportunities.

In 2020, the EIT Digital Professional School launched four new digital transformation courses. These are Applied Data Science, Blockchain for Digital Manufacturing and Logistics, Digitalisation and Industry 4.0 in Food Processing, and Sustainable Digital Innovation. In total, the EIT Digital Professional school now holds 11 courses in its portfolio. Alongside the new ones, these are Blockchain for the Decision Maker, Business Implications of AI, Cybersecurity for Industry 4.0, Data Science for Business Innovation, Digital Transformation and Social Challenges, Get Ahead in the Ongoing Digital Transformation and Product Lifecycle Management.

The EIT Digital Summer School is one of the most successful in Europe. In 2020, each online

Summer School is themed around one of EIT Digital's five focus areas and offers a real experience of business development through genuine cases proposed by EIT Digital's industry partners. Over two weeks, participants work in teams to investigate relevant problems and find solutions to the proposed challenges. All participants are guided by EIT Digital teachers and coaches, offering great experience in innovation, entrepreneurship and business planning.

In summary, the EIT Digital Academy's brand visibility is improving every year because of its high satisfaction ratings and commitment to quality. The results obtained in 2020 will allow the EIT Digital Entrepreneurial Academy to continue designing its programmes to enrol more students and participants.

EIT Digital believes that Europe's digital transformation requires a solid base of training and continuously updated knowledge, and that this training must combine technical knowledge with Innovation & Entrepreneurship (I&E) education. EIT Digital worked during 2020 to continue the consolidation of its Academy as a source of digital education in Europe.

2020 STATISTICS

MASTER SCHOOL

Programmes, 2020	**8**
Students enrolled, 2020	**285**
Students graduated, 2020	**245**
New programmes launched (Fintech and Digital Manufacturing)	**2**
Programmes, 2020	**8**

INDUSTRIAL DOCTORAL SCHOOL

Students enrolled, end of 2020	**102**
IDSL track	**49**
PhD proposals validated	**20**
Organisations participating	**39**
Number of locations, 2020	**11**

PROFESSIONAL SCHOOL

Courses produced	**4**
Courses piloted	**1**
New courses	**4**
Courses in 2020	**11**

SUMMER SCHOOL

Number of Summer Schools	**14**
Participants	**424**
External paying participants	**67**
Business cases analysed	**80**
Number of summer schools in 2021	**11**

Acceleration

The EIT Digital Accelerator supports fast-growing deep tech ventures in scaling their businesses in Europe and beyond. The programme is tailor-made and designed to meet the internationalisation and financing needs of European scale-ups.

In 2020, the EIT Digital Accelerator focused on expanding its corporate network and increasing the quantity of admitted companies. A total of 24 new European scale-ups joined the accelerator, and in total, 68 were supported throughout the year. The average revenue of the scale-ups entering the portfolio was €1.8 million with an average team size of around 32 employees.

The EIT Digital Accelerator supports scale-ups in two ways: Access to Market (A2M) and Access to Finance (A2F). The team is made up of over 25 business developers and fundraising experts in our nine European nodes, as well as our Silicon Valley Hub.

In Access to Market, the team supports scale-ups with qualified lead generation through targeted introductions and corporate matchmaking events across Europe. In 2020, the team facilitated over 1,750 direct introductions to potential customers in 22 EU countries and the USA. This is a big help for scale-ups that are struggling with new market entry and facing very long sales cycles doing business with EU corporations.

In Access to Finance, the team provides scale-ups with the required fundraising guidance, preparation and investor connections to raise Series A or Series B investments (from €2 million to €15 million). In 2020, the team supported 22 scale-ups with fundraising and was able to directly facilitate investment deals for 3 scale-ups totalling €21.5 million. Case studies of the two of them, SidekickHealth (€17 million) and CashDirector (€3 million) are featured further in this report.

As of the end of 2020, the EIT Digital Accelerator portfolio companies – including alumni – have raised over €1 billion in funding, of which €102 million was closed in 2020. At the same time during 2020, six companies made successful exits. Amongst the EIT Digital Accelerator alumni companies, there are 11 centaurs – companies with a valuation of over €100 million.

2020 was a record year for the EIT Digital Challenge – the annual pan-European competition that identifies the best fast-growing digital technology ventures in Europe. 403 companies applied from 32 countries – a 44% increase in applications compared to the previous year – the most varied country – representation in the scale-up competition's seven-year history.

The top 20 scale-ups were invited to pitch their technologies at an online final event in front of an international jury of experts and investors. The first prize winner received a grand prize package worth €100,000. In addition, the top five winners shared a prize package worth €250,000. They also joined the EIT Digital Accelerator and will receive international growth support for one full year.

EIT Digital Challenge 2020 winner Deepomatic

10
eit Digital

2010 - 2020
CELEBRATE
INNOVATION

Digital Tech

Innovation

Within the Innovation Factory, in 2020, 13 activities were executed in Digital Tech, launching 14 new products on the market and creating four new start-ups.

Ariadne Maps

The Ariadne Maps start-up, created in 2019 within the People Movement Analysis and Optimisation innovation activity, extended its indoor tracking technology to different use cases in 2020. The start-up has signed up big clients like Singapore Airport as well as Edeka and MVV in Germany. It is also expanding its professional relationship with Deutsche Bahn, which is now using Ariadne Maps' technology across an entire railway line.

The start-up's technology allows physical-business owners to anonymously analyse people's movements indoors with an accuracy that is up to two orders of magnitude better than GPS. The solution captures the signals smartphones send on different frequencies (GPS, Wi-Fi, GSM, Bluetooth) and uses them to detect people's movements and location.

The technology is being deployed across several industries, such as retail, transportation and hospitality. Retailers like the Bikini shopping centre in Berlin are leveraging it to find out in front of which store and which products people dwell the most, which in turn enables businesses to optimise their layout and their offering. In the transportation sector, Ariadne Maps helps airport managers understand how much time it takes passengers to reach the departure gate, from the moment they enter the airport. This allows them to identify and remove bottlenecks. In the hospitality sector, the start-up's technology can help hotel managers see immediately how the flow of guests is spread across a certain timeframe, and in which common areas. Ariadne Maps has signed deals with hotels in the Emirates, such as the Atlantis Palm Hotel in Dubai.

ariadnemaps.com

The Ariadne Maps start-up, created in 2019 within the People Movement Analysis and Optimisation innovation activity, extended its indoor tracking technology to different use cases, signing up prestigious customers such as Singapore Airport, the Munich Transport and Tariff Association and IKEA Canada.

The CityDefend activity has developed a pioneering technology that allows businesses to search directly over encrypted data stored on the Cloud. The CityDefend Cybersecurity Solutions start-up was incorporated to commercialise the solution, which is currently deployed by a well-known eSign document management service provider and by a manufacturer of high-speed hardware accelerators.

The EUiD Identity and Data Services start-up was launched within the EuroID Proxy activity, bringing to market a solution and service for sourcing authentication, identity and attribute transactions for private and public identity providers, compliant with eIDAS for cross-border transactions. The Total System Shield activity created an AI/ML-based product to analyse events, detect and mitigate anomalies on host machines with efficient kernel space packet processing for network threat detection.

The SCOUT innovation activity created the start-up Ingwaz, which provides a Platform-as-a-service for secure lifecycle management and over-the-air updates of all customers' connected devices regardless of the kind of connection or platform.

In the AI area, data and visualisation platforms were addressed by two innovations. The A/RporTWIN activity created a digital twin focused on airport management and airport operations. A/RporTWIN is deployed at Aberdeen airport where managers are able to visualise real-time data from multiple data sources to optimise the turnaround of operations. I-FLY created a marketplace for specialised IT services for enhancing inspection operations of critical infrastructures using drones.

Another focal point was in automated content creation and management. The newly created JECT.AI start-up launched a cloud-based artificial intelligence technology platform that empowers news and media, marketing and communication organisations to discover creative angles for news articles. It is already in trial use by WAN-IFRA. MateDUB created AI-empowered tools to automate part of the subtitling and dubbing processes, reducing time and costs.

Finally, Oblivion addressed the 'right-to-be-forgotten' requirement (e.g. GDPR) for large financial companies. This is usually very hard due to the complexity of their information systems and the fact that personal data can be stored in hundreds of different systems and stored in different formats.

Nine start-ups were launched as part as the RIS Venture Program 2020 in seven different countries. Several of them, for example SeaVision which developed a device to support boat anchoring, have already raised capital from investors.

CityDefend

In recent years, the availability of cloud computing solutions has grown exponentially. Users' confidence in the security of their data stored in the cloud has not grown at the same speed, though, as data stored online can be misused or stolen. Some companies address this issue by encrypting their data before uploading it, but this gives further rise to the problem of searching and sifting through the large amounts of data archived online.

The CityDefend activity has created the start-up CityDefend Cybersecurity Solutions. The start-up has developed a scalable application that integrates across multiple cloud environments and enables businesses to maximise computing efficiency while minimising exposure to technical, regulatory, and reputational risks.

Using encryption algorithms, the CityDefend solution can perform homomorphic search over the documents. Homomorphic encryption differs from typical encryption methods in that it allows computation to be performed directly on encrypted data. This means that the search process does not require a centralised data structure, such as an index table, to achieve effective search eliminating the latency related to the network and minimising the space needed for storing the documents.

A well-known eSign and document management service provider is deploying the start-up's technology to enhance its existing offering, by allowing customers to search over signed documents. The start-up is also working with a manufacturer of field programmable gate array (FPGA)-based hardware accelerators to provide privacy preserving searchable encryption over sensitive data at high speed on dedicated devices for use in aerospace and defence applications.

www.citydefend.com

Digital Tech

Education

Digital innovation cannot take place without robust, secure and scalable infrastructures to facilitate it. These range from the underlying embedded systems supporting Internet of Things (IoT) applications, to 5G networks and edge computing. Digital innovators and entrepreneurs need to develop a deep understanding of these technologies in order to imagine new applications and take them to the next level.

The EIT Digital Master School contributes to this theme providing programmes such as Embedded Systems, Cloud and Network Infrastructures and Cybersecurity, which, following the principle of application-focused technical programmes, provide students with both the technical know-how and growth mindset to develop, grow, and consolidate these infrastructures. Technical education is at a very high level as two of the EIT Digital Master School students illustrate: they managed to amaze the global community of Apache Flink users with a breakthrough innovation.

EIT Digital Master School students amaze global Apache Flink community with breakthrough innovation

Two EIT Digital Master School students developed a feature to significantly reduce the up- and downscaling processing time for Apache Flink during their thesis research. This was so significant that they were selected to present their solution at two global conferences.

Muhammad Haseeb Asif and Sruthi Sree Kumar learnt about the Apache Flink open-source framework that is being used by global tech companies during their Cloud and Network Infrastructures studies. They were so inspired that they researched this further as interns at RISE (Research Institutes of Sweden). During their thesis, they developed FlinkNDB on top of the Mysql Cluster Engine. This is a major feature to improve the up- and downscaling functionality on Apache Flink. Haseeb Asif explained: "The solution reduces up- and downscaling time from hours to seconds. This saves companies a lot of money and reduces energy waste, making the computing industry more sustainable."

They got to speak about it at Flink-Forward, the annual global conference for the Apache Flink community. They were listed alongside people from Uber, Netflix, Amazon, Bol.com, Yelp, Spotify, Intel, Ververica, Intuit, Microsoft, and Alibaba. Asif said: "People were tweeting about our project; someone said that our presentation was the best talk of the day."

In August, Google invited the students to speak at the Beam Summit 2020, a conference for Apache Beam users worldwide. Their contributions to the conferences and the feedback they received, gave the students the motivation to carry on. "When people say that we have developed something that they were looking for, it inspires us to deliver," said Sree Kumar.

The EIT Digital Industrial Doctoral School supports deep digital transformation through communication, computing and cybersecurity technologies. Currently, it is running research projects with several of the main tech and communication players, for instance Ericsson, Nokia and TIM, covering the following topics: 5G (5G edge computing and integration challenges for 5G); networks (network architectures, solutions for and cooperation with end-hosts in next-generation networks, and network technologies for big data); quantum computing (quantum security of cryptographic primitives) and security (cryptographically secure, on-chain pseudorandom number generation (PRNG), anonymity and authentication in large databases). In 2020, seven PhD thesis proposals on tech have been approved and all positions have been filled.

The EIT Digital Professional School offers several courses within the Digital Tech focus area, covering various topics: digital transformation, big data, blockchain, security, artificial intelligence and data science.

In 2020, the EIT Digital Professional School launched three new courses in the focus area Digital Tech. Besides the existing course Blockchain for the decision-maker, the Budapest University of Technology and Economics provides a short executive course – Blockchain for Digital Manufacturing and Logistics. This course focuses on the application opportunities of blockchain-driven solutions in digital manufacturing and logistics.

Another new course is called Sustainable Digital Innovation. As the name already suggests, this will help managers to integrate sustainability with digital solutions into your business planning and product development. The first two days of the course will be taught at KTH Executive School in Stockholm, the last two days at Fraunhofer IPK in Berlin.

Also, EIT Digital partner Bright Cape developed the course Applied Data Science, aimed at C-level and executive managers. The course combines strategic thinking on data science within the company with a practical bootcamp. After all, data science should be a board-level matter.

In 2020, EIT Digital held three online Summer Schools in the Digital Tech focus area: Secure e-Governance, Internet of Things and Business Transformation and Big Data Analytics. Each school had, on average, 35 participants working on business challenges in teams of about six. Around 20 business cases generated from industry (including EIT Digital Partners) were developed.

Business cases came from a variety of sectors such as smart homes, elderly care, infrastructure, transport, logistics, manufacturing and cybersecurity. This shows the growing interest from the industry ecosystem toward the EIT Digital Summer School.

Getting behind the scenes of blockchain

How do new technologies like blockchain impact your business? Questions like these are key to the executive courses offered by the EIT Digital Professional School in collaboration with renowned partners. In 2020, Zeno Amtmann, IT Consultant at AAM Management Consulting Ltd, participated in the course Blockchain for Decision Makers.

"Having almost 20 years' experience in the IT and IT security field with a legal background, I firmly believe that this industry faces challenges, both in diversity and volume in the next couple of years. Blockchain seems to be a promising solution to a number of issues that we face today; however, its full potential is hardly understood. Therefore, it seemed beneficial to spend time studying this field and expanding my knowledge in this area as part of my continuous learning.

"Choosing EIT Digital professional education for the course was obvious because of what it stands for, a strong digital Europe, but also due to its education partner and course organiser, the prestigious Budapest University of Technology and Economics.

"I had some basic understanding of blockchain technology and one application of that, namely the cryptocurrencies. However, I was not aware of the vast options and possibilities that this technology could provide. The course was extremely useful to understand these and get somewhat "behind the scenes" of blockchain. It offered a great deal of new knowledge and a better understanding of this new phenomenon."

Digital Tech

Acceleration

Aligned with the Digital Tech focus area, in 2020, the EIT Digital Accelerator scale-up programme supported 15 Digital Tech scale-ups from nine European countries in the areas of data, cybersecurity and networking.

Deepomatic

deepomatic.
Visual Automation Platform

Deepomatic's no-code visual automation platform enables businesses to build their own computer vision applications for unique industry needs. These applications enable employees to do more in less time and avoid errors by automating visual tasks such as inspection and quality assessment. For instance, using Deepomatic's technology, field workers can capture and double-check their work with a single picture or video.

Deepomatic's customers include players in the telecom industry, such as ISPs, B2C & B2B telecom operators, network construction companies, and utilities. For example, Bouygues Telecom used to control only 8 to 10% of the work carried out by its subcontractors. Deepomatic's visual automation technology enabled them to control the quality of 100% of their interventions in real time simply by analysing images from the technicians' smartphones.

Deepomatic was awarded first prize in the EIT Digital Challenge 2020. As part of the prize package the company has joined the EIT Digital Accelerator programme where it will be supported for 12 months to grow internationally.
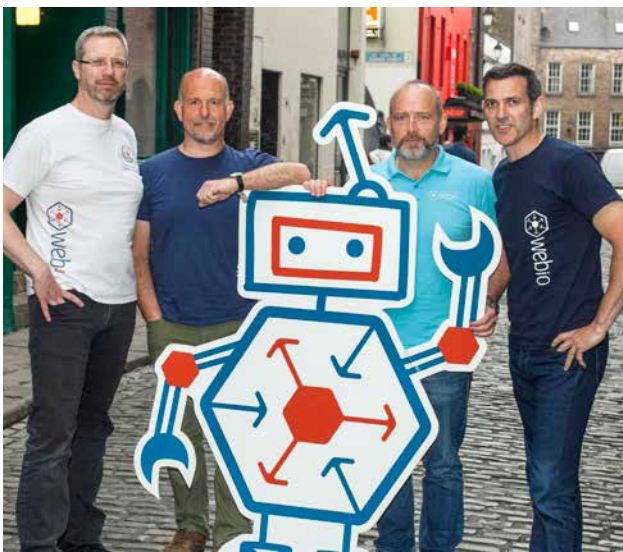
"This award is huge recognition for the work of the entire team! Our company is five years old and being named by EIT Digital as best deep tech start-up in Europe is really meaningful at this moment – the beginning of our scale-up stage," said Augustin Marty, CEO and Co-Founder at Deepomatic. "We are now concentrated on market access and to help all field engineers work in a more qualitative and efficient way. In this respect, I believe we can get help for our product marketing, but also our prospective efforts in the telecom, energy and utilities industries."

deepomatic.com

The portfolio companies supported by the EIT Digital Accelerator provided significant value for customers looking for cybersecurity solutions (IoT security, critical infrastructure security and prevention security), solutions supporting multi-channel communication and human-machine interaction, or for any kind of data analysis, data-management or data-reporting solutions.

For instance, French scale-up Evina helps mobile network operators, merchants, ad networks and payment gateways worldwide protect themselves from fraudsters with Evina's advanced cybersecurity solutions for mobile payments and advertising. Another example is German company Structr that helps organisations digitalise complex operational structures and processes with graph technology enabling them to develop digital solutions in a fast and cost-effective way.

In addition, InnoTractor, a company launched through EIT Digital Innovation Factory joined the Accelerator programme as it is looking to expand into new, international markets and raise Series A funding. InnoTractor's blockchain-based solution is designed to make supply chain more efficient by providing better visibility and control of distributed assets at each step.

In addition to the regularly-admitted portfolio scale-ups, two companies selected for the finals of the EIT Digital Challenge 2020 joined the portfolio. They are: first prize winner Deepomatic (France) that developed a no-code visual automation platform to support field operations with computer-vision applications; and one of the finalists, Squirro (Switzerland), that enables organisations to transform enterprise data into AI-driven insights. Deepomatic and Squirro will start their acceleration programme in 2021.

Webio

Webio, the conversational middleware company, empowers companies to engage in direct digital conversations with their customers across messengers such as Facebook Messenger, WhatsApp, Viber and SMS, and voice-first interfaces such as Alexa and Google Home.

Webio uses the power of artificial intelligence and machine learning for a 'blended approach' that lets automated bots work alongside contact centre agents. The use of Webio's platform leads to significant benefits: agent productivity improves by up to 42% and the positive conversation outcomes increase by 71%, while unwanted inbound calls decrease by up to 64% and operational costs reduce by over 70%.

The company joined the EIT Digital Accelerator in the middle of 2019 and has been supported in 2019-2020 to expand its business in other European markets. EIT Digital Accelerator's access to market team worked closely with Webio on the go-to-market plan and introduced the company to a number of potential customers.

"Our engagement with the EIT Digital Accelerator team has been a real plus for Webio. From an investment viewpoint we achieved exposure to such a wide range of "on-target" vs "right" across Europe, exposure that we could not have hoped to achieve by ourselves. Furthermore, the EIT Digital access to market team put our brand in front of potential customers in new markets helping us gain reach above and beyond the size of our company," commented Cormac O'Neill, CEO of Webio.

www.webio.com

Digital Cities

Innovation

Within the Innovation Factory, in 2020, the Digital Cities focus area included nine innovation activities, on mobility, data analytics and city safety. The outcome of this portfolio was the launch of 11 new products and four new start-ups.

LMAD

The Last Mile Autonomous Delivery (LMAD) innovation activity has developed a software platform to operate multiple types of autonomous delivery robots.

Its first pilots have been held in controlled areas in which the robots can move smoothly, without facing too many constraints; later, they will be extended to more challenging cluttered environments, such as city centres.

The solution was first deployed at Nokia's Paris-Saclay campus in France. The LMAD start-up, which was incorporated to commercialise the solution, successfully operated in 2020 in Finland as well. A pilot was run in August at Aalto University Campus, near Helsinki, a parkland-style area at the core of Espoo's Otaniemi district. The local K-Market grocery store offered its customers the option of ordering groceries online and having them delivered by LMAD's autonomous delivery robot.

In another Finnish pilot, the robot was used to collect and deliver to Helsinki social services gifts for the "Christmas Tree" charity campaign. The social services, in turn, delivered them to families. The robot allowed the gifts to be collected safely outdoors, therefore respecting the pandemic context. Additional new pilots are planned in Finland and France, to test the software with robots made by various manufacturers.

The first pilots were run using robots by activity partner GIM Robotics. Upcoming ones will feature an autonomous delivery robot produced by another partner, French manufacturer TwinswHeel.

LMAD is an open, flexible platform, that can work with several providers, a key differentiator from potential competitors.

www.lmad.eu

The activity Last-Mile Autonomous Delivery addressed the demand for low-cost, flexible parcel deliveries. It developed an agnostic platform to manage deliveries by any type of autonomous delivery vehicles. In 2020, the start-up LMAD was incorporated in France, and deployed successful pilots in its local country and Finland.

Three other innovation activities aimed to improve mobility in cities: CityBeamer created a new start-up to develop a platform to operate micro-mobility urban services, CY-PACK developed a system supporting cross-border identity authentication to grant access to physical assets, like car-sharing vehicles and smart lockers; and Shared Cityhub for Parcel Deliveries built a solution to optimise the delivery of parcels in city centres, thus limiting traffic congestion and pollution.

The use of deep tech to engage citizens in city life is the objective of activities like AR4CUP, which uses augmented reality to collect citizens' feedback on new urban developments, allowing them to see the future city infrastructure before it is built, and Citizen City Maker, which has created a new start-up to provide digital

tools for city planners, including gamification approaches, for a better understanding of the needs of the citizens by the city planners.

Three other activities are focused on safer cities: DiPreTreat created a system based on IoT sensors integrated into concrete infrastructures, like pillars or bridges, to run continuous inspections of aging materials and trigger alarms when any risks come up; EVER-AI developed a tool, based on AI, for doctors in an emergency vehicle to transfer real-time health data to the hospital about the patient due to be shortly arriving (it will be brought to market through a new start-up with plans for the Spanish and Belgium markets initially); and EZY-CRD-GO built a solution, based on IoT sensors, that detects people at crowded events and modifies information signs to optimise traffic flows and avoid bottlenecks - also a new venture.

In the RIS Venture Program, the start-up WEGO Srl was incorporated in the UK, and is offering new business models for car-sharing.

The online DeepHack 'Data for urban logistics' was organised in November 2020, with the goal to create data-driven business solutions for logistics companies for them to make informed decisions and improve their business operations. It attracted 59 participants from 25 countries. The winning team developed a solution to identify the ideal location for mini-logistics hubs for pickups and other transporters.

CityBeamer

CĬTYBEAMER

Digital technology has vastly boosted the popularity of e-vehicle sharing systems. E-mopeds, e-scooters, e-bikes and other electric micro-vehicle companies are taking over many cities.

Micro-mobility service providers are often faced with high costs and negative margins. The profitability issues are due to logistics, maintenance and cost of customer acquisition. The CityBeamer start-up was incorporated in The Netherlands within the CityBeamer innovation activity. It targets business-to-business customers who want to operate profitable and sustainable micro-mobility services (e.g. bike or scooter sharing services), or municipalities who want to boost sustainable tourism.

The start-up has developed technology to reduce the cost of logistics and maintenance; its offering includes apps and platforms which allow higher value-add services. In particular, the activity has created three software-as-a-service solutions: a complete mobility solution for bikes and scooters, a vehicle logistics and maintenance marketplace, and a tourist application.

The pandemic impacted the go-to-market plans of the start-up, due to reduced mobility and economic activity. Nonetheless, the company was able to successfully run two pilots of its bike-sharing mobility solution, which make use of smart locks to track location and use of the bicycles. One involved the employees of a company in Tilburg, who used bikes fitted with CityBeamer's smart locks for cycling between the company's two city offices.

Another pilot was deployed for public transport users of three Dutch cities: Den Bosch, Tilburg and Bergen op Zoom. The bikes were used for traveling the 'last mile' after using public transport.

www.citybeamer.com

Digital Cities

Education

In smart cities, the generation and flow of data are just as important as the flow of people, goods and vehicles. Knowing how to process and use this data in a way that creates value for city inhabitants requires the customer-centric approach and deep tech skills that are the trademark of EIT Digital Master School graduates. In this regard, within the EIT Digital Master School, programmes such as Embedded Systems; Cloud and Network Infrastructures; Cybersecurity; and Data Science, are very much in demand.

A notable example of how the competences and skills gained within the EIT Digital Master School substantially contribute to this theme is the project of alumnus Benjamin Olayinka who is using his skills to build a trash-eating robot.

The Industrial Doctoral School contributes to the digitalisation (smartification) of cities, understanding it as a continuous, never-ending process of increasing complexity. Its current research-based innovation topics are: leveraging city data for vital urban living; fostering autonomous driving in cities (vehicle-to-everything and AI for autonomous driving); municipality services and infrastructures; service-support platforms; and security and safety in smart cities. Five PhD thesis proposals on Cities were approved and filled in 2020.

"We screw up the world and need to find solutions"

He is a DJ, an embedded system engineer and works as a sports ads model. Alongside his job at an Amsterdam IT company, he is working on a robotic innovation to clean streets from plastic that can be recycled into goods. "We screw up the world and need to find solutions."

In 2018, Benjamin Olayinka started the two-year EIT Digital Master School Programme Embedded Systems (Technical University in Berlin and KTH Royal Institute of Technology). In 2020, he participated in the EIT Digital Alumni Start-up Competition in 2020 with the trash-eating robot.

This project came from a deeply-held mission: "I grew up in Ibadan, Nigeria, where there's plastic trash everywhere. When you walk around, you're walking over plastic bags and bottles, it sucks. I always wanted to one day make a robot to clean up all that trash." Though he did not win the competition, he is determined to carry on.

"It would be great if the pitch I made could be real: robots collecting plastic from the streets. These can be cleaning up trash everywhere. The collected plastic can be reused for building roads in Nigeria or building more trash eating robots. There is a growing market for recycled plastic. People are realising that we messed up the world so badly that we need to try to find solutions for the long term to be sustainable. So, there is good timing for projects like my robot. It brings exposure

Benjamin Olayinka
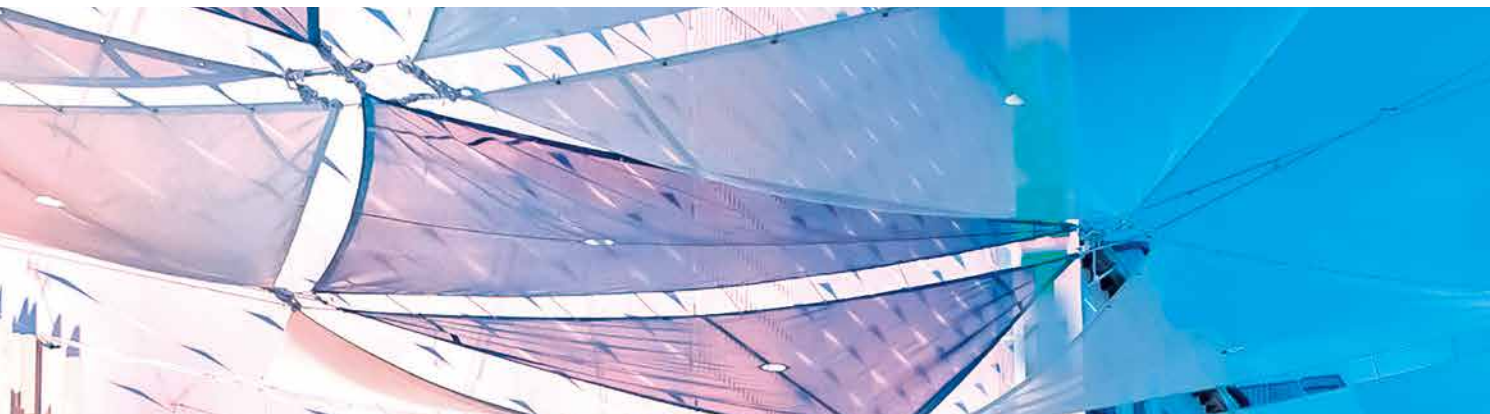
EIT Digital held four online Summer Schools in the Digital Cities focus area: 'Unleashing the Power of Data for Better Cities', 'Digital Cities as Infrastructures for Smart Mobility' and 'Digital Transformation for Resilient Cities' and 'Design Thinking & Scaling Services for Cities'. Each school had about 30 participants. Summer School participants work on business challenges in teams of six students. In total, 20 business cases originating from the industry ecosystem were developed.

Klemen Kreft

"I will advocate for digital transformation as much as possible"

Klemen Kreft, PhD Researcher in Pharmaceutical 3D Printing at the University of Ljubljana and Novartis is on a mission to advocate for digital transformation in the company he works for. "The industry is lagging behind in utilising it." He spent his summer holiday at the two-week EIT Digital Summer School Digital Cities in Ljubljana, to learn about how to make business from tech. Now he is driven to make a change more than ever.

"Digitalisation and data are becoming increasingly important in the pharmaceutical industry. The industry is lagging behind in utilizing it. This is why I applied for the EIT Digital Summer School. My lack of knowledge in "digital" pushed me to get some introductory insight into how data is used in other industries, which is directly connected to the creation of digital cities."

"The EIT Digital Summer School was an amazing experience. I learned so much. The school and its participants gave me insights into how other industries are approaching digital transformation.

"It is fascinating how digital transformation and city resilience are connected. I do realise now that constant change and the introduction of digitalisation can influence the prosperity of companies and also impact urban resilience. Implementing digital innovations in companies thus helps to build up the resilience of cities against emerging problems.

"What I take back to Novartis is the notion of the need for digital transformation. I will try to advocate for it as much as possible within the company and contribute towards its realisation. It goes without saying that constant change is essential for the company's growth."

The 'Data for Better Cities' summer school was attended by EIT Digital Master School students and it was highly appreciated by 14 external participants as well, despite the online format due to the pandemic. During the first week, the topic of Digital Cities was introduced through lectures and business cases. Participants explored market and user profiles, as well as producing initial service concepts.

They were also introduced to data analytics. Specifically, this course addressed market and user profiles and product and service concepts. It covered technological aspects, with participants performing market studies and competitor analysis, and exploring social and usability aspects of the proposed business cases.

Digital Cities

Acceleration

Aligned with the Digital Cities focus area, the EIT Digital Accelerator supports scale-ups leveraging digital technologies to serve cities and citizens.

In total, four companies from France, Switzerland and Germany were supported by the EIT Digital Accelerator within the Digital Cities focus area in 2020. Their solutions cover urban mobility, drone detection, IoT and city infrastructure, and location intelligence.

Two of them, Cerbair (drone detection and neutralisation solution) and Loriot (a secure and scalable long-range IoT infrastructure provider), joined the programme after winning the EIT Digital Challenge in 2019 and have received international growth support as part of the prize.

French company Velco was actively supported by the Access to Finance team to raise Series A funding from international investors. Velco offers an all-in-one management solution for connected e-bikes and e-scooters in Europe. Its modular white label software platform connected to Velco hardware technology enables fleet management optimisation, accidents detection, geofencing and safety.

Velco

Leveraging innovation and a strong reputation in the bicycle industry, French scale-up Velco aims to connect all types of two-wheeled vehicles (i.e. e-scooters, bikes, motorcycles) in the urban environment. Velco's connected solution helps two-wheel brands, manufacturers and transport operators optimise fleet management, generate high value-added data for communities and fleet managers, detect accidents, track location and improve safety.

The company already supports major players in urban mobility in France and is targeting the European urban mobility market with an ambition to become the European market leader by 2024.

Since March 2020, Velco has been actively supported by the EIT Digital Accelerator's team in launching and coordinating the fundraising, which generated strong interest from multiple investors across Europe resulting in a €5 million series A funding. In 2020, the company also benefited from the EIT Digital venture support, with the goal to adapt and accelerate within the post-crisis economic reality.

The recent fundraising includes commitments from Banque des Territoires, the Belgian impact fund Inventures Investment Partners, and Velco's historical investors Go Capital, Pays de la Loire Participations, led by Siparex and family offices.
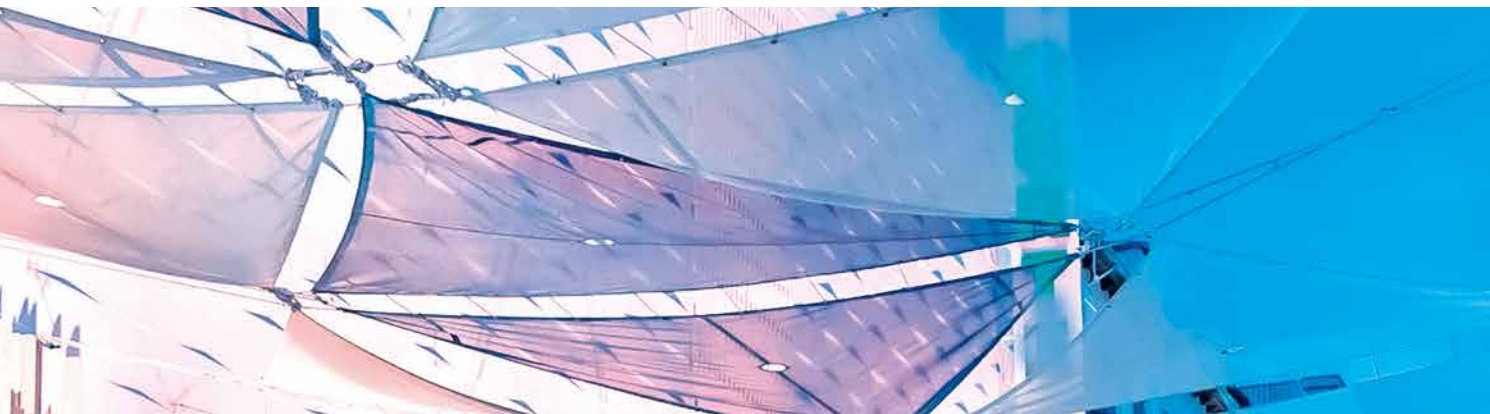
"EIT Digital supported us in carrying out our fundraising by targeting with us the relevant investors who can fit into our strategy. By working with the EIT Digital team we were able to save time and continue to focus on our business. We were working with quality people who understood our challenges, our strategy and our business," commented Pierre Regnier, CEO and Co-founder of VELCO.

velco.tech

The last company supported within the Digital Cities focus area is the winner of the 2020 edition of the EIT Digital Challenge – Targomo. Based in Germany, Targomo develops location intelligence solutions to optimise retail networks, deliver better public services, and improve real estate searches. The company enjoyed great international visibility during the Challenge campaign and will receive growth support from the Accelerator team during 2021.

Targomo

Bringing together advanced location analytics, artificial intelligence and big data, Targomo supports companies and organisations to unlock the full potential of location information without the need for specialised GIS knowledge. Users gain valuable insights to increase revenues, save costs and gain decisive competitive advantages. Targomo was founded in 2013 and is based in Berlin and Potsdam.

Its location intelligence platform is already being used successfully in Germany and abroad: real estate and retail companies forecast the potential of locations and optimise offers or delivery routes. Public transport companies in Norway use Targomo to optimise their route planning and better adapt it to their needs.

Targomo was among the top five winners of the EIT Digital Challenge 2020, the seventh edition of EIT Digital's contest for digital deep tech scale-ups. As part of the prize package, the company joined the EIT Digital Accelerator where it will receive international growth support during 2021.

"We want to expand and really invest in our sales and marketing. With the support of EIT Digital we can get new leads, find the best opportunities and extend our sales to other European markets. We already have some lighthouse deals and see a great opportunity to replicate this in other markets," said Patrick Schönemann, CEO of Targomo.

"The collaboration with EIT Digital can help us to cross borders, which in particular for sales and marketing is difficult in Europe," added Henning Hollburg, Managing Director.

www.targomo.com

Digital Industry

Innovation

Within the Innovation Factory, in 2020, the Digital Industry portfolio included nine innovation activities distributed across production, logistics and retail. The activities delivered 10 new products and two new start-ups.

Gravity

GRAVITY was a successful continuation activity in 2020. The start-up Innotractor, launched in the initial phase of the activity, developed the DiLLaS product. DiLLaS is a Secure Data Ledger, which facilitates the central registration of logistical transaction data and supply chain management between participating parties. The system allows multiple parties to seamlessly work together in a trusted fashion, whilst securing data privacy for individual parties. Logistical operations can be made more efficient through easy verification of agreed service level agreements.

Gravity is the IoT platform that is used to collect the data from the shipments. Both Gravity and DiLLaS have been launched to the market and InnoTractor has seen substantial demand for both solutions. Each of the cases makes a significant contribution to UN sustainability goals.

Innotractor has had a steady customer pipeline since it was first created. The start-up is working to finalise contracts with large logistics companies. It will use the first cases as references in marketing and communications through the current and additional channels. The goal is to ensure the reuse of investments as well as increase the recurring SaaS income, to continue the development of the platform's functionality, stability and flexible user interfaces. The target is to reach 100,000 active devices for Gravity by the end 2021.

innotractor.com/saas-platforms
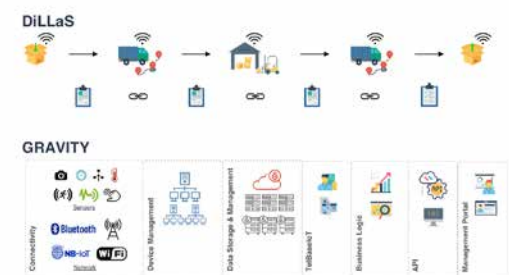
In the production area, the activities focused on production design, advanced employee training solutions, and specific automated production operations. The TAKEOFF activity created a digital twin simulation integration platform to be operated as a service ("Simulation-Integration-as-a-Service"). The service helps the digital transformation of process industries in the design of new plant and plays a key role in Europe's journey towards a sustainable bio/circular economy. EdAR helps educators integrate high-quality augmented reality modules in their courses – making learning more intuitive by overlaying 3D holograms and explanations onto the physical world. EdAR made the first sales with university customers and is currently marketing the solution to large engineering companies. The CollaboVR activity has created a software for multi-user virtual reality training, enabling industry staff to learn by interacting and perform hands-on training with team members from all around the world in a virtual space. iTrack created an advanced monitoring system to monitor the structural health of rails, by detecting breakages as early as possible. SAROCA has created a robot for the optimisation of the maintenance and cleaning process of vehicles, first deployed in car-sharing services.

In the logistics area, the GRAVITY activity launched the DiLLaS Secure Data Ledger which facilitates the central registration of logistical transaction data and supply chain management between participating parties. It is now working to finalise contracts with large logistics companies.

In the retail area, the activities targeted store operations, customer engagement and essential data analytics for merchandising. The Shelf-

Scanning Robot activity created an autonomous robot capable of scanning store shelves and detecting anomalies: out-of-stock products, misplaced items, missing price tags, or wrong prices. The VIPO activity (start-up VIPO Group) lets customers interact with a LCD totem with a built-in web camera, located at the point of sale, and receive fashion advice based on their appearance and the in-store inventory. 'Consumer-centric demand forecast and sale prediction for fashion industry' developed a product for AI-based demand and sales forecasts by integrating external data sources like social, IoT, weather, or macroeconomics.

The RIS Venture program has supported several enthusiastic teams of entrepreneurs in Digital Industry to found seven start-ups in Portugal, Poland, Estonia and Greece. Most of them are based on the use of IoT and machine learning. In some of the cases, like GetBoarded in Portugal, the start-up has already raised a round of financing with investors.

Three online DeepHack events were organised in this area. 'From Farm to Fork' was organised in June (together with EIT Health and EIT Food) and addressed digitally assisted food chain, attracting 57 participants from 15 countries. The winning team was a student initiative to provide people with healthy, frozen food from local farmers. 'Open BIM' was organised in November and targeted cost-effective tools to reconstruct BIM models from 2D plans in paper, attracting 40 participants from 14 countries. The winning team combined image processing for identifying structural elements like walls on the floorplan with computer vision to retrieve any symbol from the legend. 'Mass Customisation and 3D Printing' was held in December to develop solutions to automate design processes for the customisation of parts and attracted 28 participants from 21 countries. The winning team used photogrammetry to allow users to reconstruct arbitrary shapes.

VIPO

Deeper understanding of consumer insight is crucial for brands operating in the retail industry. VIPO Group, a start-up born from the VIPO innovation activity, has developed a technology that uses computer vision to help retail and fashion companies customise their users' experience.

The start-up initially planned to offer the solution only to physical stores. Customers would interact with a 49'' LCD totem with a built-in web camera, located at the point of sale. By touching the device screen, they could receive fashion advice based on their appearance and the in-store inventory.

In spring 2020, the product hit the market. It was well-received: the Colombian branch of Falabella, the largest South American department store, was the start-up's first customer and VIPO began to chase deals in Europe as well.

Then the COVID-19 pandemic hit, impacting on VIPO's target market. The start-up decided to pivot to e-commerce, showing inspiring entrepreneurial resilience.

The team developed the V-Shopper application, which seamlessly integrates with the e-commerce experience of fashion retail websites. Customers can upload a picture of themselves to a brand's e-commerce platform, and receive customised recommendations based on the computer vision analysis of the picture and what is available in-store or online.

Besides Falabella, which is using both the totem and the V-Shopper product, two other customers are now using VIPO's products in Colombia: Arturo Calle and Totto. Two more deals are being finalised in France and Spain.

vipogroup.com

Education

Education and skills needs in the area of Digital Industry are covered by several EIT Digital Master School programmes including topics fully aligned with the challenge of Industry 4.0.

Lack of digital transformation skills threatens food industry

"Digital transformation is becoming an issue of primary importance in the European food industry," said András Sebők, general manager at Campden BRI in Hungary. Digital transformation is needed due to consumer and societal pressure. But the problem is the lack of skilled people to make it happen. "Education is what's needed", added Sebők.

Even though the food and drink industry is the largest manufacturing industry in the European Union, the sector is far behind other industries when it comes to digital transformation, according to Sebők. The industry should speed up, for it faces increasing pressure from the consumer and from society. Consumers, for example, demand a lot of diverse and personalised food products – at the same cost as mass-produced items.

Digitalisation and Industry 4.0 is a solution to this challenge and to maintain profit margins. Sebők added "There is a big unexploited opportunity in the food industry because many of the available solutions in other industries can be adapted to solve food problems relatively easy."

Thus, education is needed. "The real risk is that the industry will be limited by the lack of skilled people. Current employees need conversion training and the industry needs managers to convey the digitalisation message to staff."
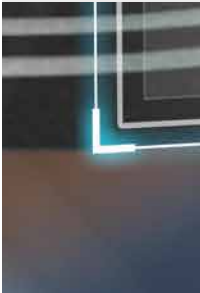
This is exactly why food and drink industry research & development institute Campden BRI-Hungary joined up with the National Research Council of Italy and ELTE Faculty of Informatics to develop the 4-day executive course Digitalisation and Industry 4.0 in Food Processing for the EIT Digital Professional School. Aimed at executives, it brings ICT providers and food business leaders together.

The new programme in Digital Manufacturing, launched in 2020, widely covers the main competences underpinning the Industry 4.0 and all the topics that are needed for the digital transformation of industry. Other examples are the programmes Autonomous Systems, Embedded Systems and Human Computer Interaction and Design. Online courses cover many topics to do with Digital Industry, like the Development of Real-Time Systems, which is a key part of enabling the digital transformation of industrial processes. Digital Industry can benefit from the ingenuity and creativity of our digital innovators, for example, by adopting digital solutions for the circular economy like Construqt, which aims to make sustainable building materials more accessible.

The Industrial Doctoral School focuses on the development of doctoral applied-research projects in which deep tech is helping to revolutionise the manufacturing industry across the whole value chain. The current topics are: production side (data driven solutions, factory floor solutions, predictive maintenance, circular economy and waste management) and retail side (customer insight understanding, product customisation at retail point, product service customisation, online shopping and automatic offer portfolio). In 2020, EIT Digital has opened and filled five PhD thesis proposals on industry.

Within the focus area of Digital Industry, the EIT Digital Professional School partners developed

two new courses. The class Blockchain for Digital Manufacturing and Logistics, already mentioned in the Digital Tech section, focuses on the application opportunities of blockchain-driven solutions in digital manufacturing and logistics. This course has been developed by the Budapest University of Technology and Economics in Budapest. The other Hungarian academic partner, ELTE University (Faculty of Informatics), has been involved in the development of the course Digitalisation and Industry 4.0 in Food Processing. This course provides deeper insights into the digitalisation of the Food Industry. Before the two-day online training class, the producers – Campden BRI Hungary, CNR, and ELTE University's Faculty of Informatics – offer an online basic introduction course.

EIT Digital held two online Summer Schools in the Digital Industry focus area: 'IoT Platforms for Industry 4.0' and 'Ravaging Disruptions in Retailing'. Each school had an average of 30 participants. The Summer Schools work on business challenges in teams of about six participants. In total, 10 business cases originating from the Industry ecosystem were developed.

An integral learning objective of the Summer School 'IoT Platforms for Industry 4.0' was to teach participants how to develop their own IoT device using Arduino microcontrollers and connect them to one of the leading industrial IoT platforms such as Siemens MindSphere. This was offered as a specific programme in addition to the industry keynote speeches and innovation and entrepreneurship lectures that accompanied the business cases.

EIT Digital Master School alumni win start-up contest with lipstick technology

Lipstick and technology. They are the magic formula of the start-up that won the EIT Digital Alumni Start-up Contest 2020. The co-founders, EIT Digital Master School students Selah Li (CEO) and Marc van Almkerk (CTO), won tickets to a major tech conference to showcase their company Ellure that enables customers to make customised lipstick. The jury unanimously voted for this start-up as it wants to set a standard in the beauty industry.

Ellure was founded to solve a beauty problem. How to choose the right colour among mass-produced, lipsticks when the colours appear different on different lips? Ellure offers a personalised liquid lipstick in an on-demand fashion. In so doing, Selah Li, says that this mass personalisation solution helps reduce waste. "Our mission is to make beauty products that are loved by people and the planet."

With this annual contest, the EIT Digital Alumni Foundation is recognising the entrepreneurs in its community. Li: "Winning competitions like these shows that hard work pays off."

The co-founders started Ellure in 2017 during their studies in Human Computer Interaction and Design at the EIT Digital Master School. Over the last three years, they developed several solutions: a web based Augmented Reality (AR) system, a small-scale production machine that can realise over 10,000 different colours within one minute, an algorithm to design the colour, and a lipstick formulation that is suitable for automation. End of 2020, they went to market, serving a waiting list of over 600 customers.

ellure.se

Acceleration

Aligned with the Digital Industry focus area, the EIT Digital Accelerator supports fast-growing European ventures that are driving digital transformation in the production, logistics and retail sectors.

In 2020, the EIT Digital Accelerator supported eighteen Digital Industry scale-ups from thirteen European countries to grow internationally and/or raise venture funding.

Specifically, the 2020 portfolio composition had a strong focus on industry 4.0, with seven companies targeting manufacturers across Europe. Their solutions ranged from drone intelligence for industrial facilities (FlyNex, Germany), to digital twins solutions for digitalising factory floors (Infinite Foundry, Portugal). They also included industrial robotics systems for warehouses (Eiratech, Ireland and Versabox, Poland), AI-powered predictive analytics solution to boost manufacturing performance (MIPU, Italy), and remote expert support for machine manufacturers and plant operators with AR and smart glasses by oculavis, Germany.

In addition, the retail sector has been strongly represented by the portfolio companies with such solutions as AI-powered omni-channel retail platform (Synerise, Poland) and a smart workforce management tool helping retailers improve sales and reduce employee costs by allowing them to schedule, plan, and forecast the shop's sales and employee activities (Orquest, Spain).

FlyNex

FlyNex revolutionises the way companies can use drones to collect data on their industrial applications. The big issue in using drones is that it is often hard to get compliance on drone-flights when hiring expensive (manually-run) drone pilots. To tackle this problem, FlyNex offers a cloud-based Software-as-a-Service to automate drones for commercial use cases in energy, construction, property management, grid management, and more.

Companies can plan, fly, collect and process data through the FlyNex Enterprise Suite with full connectivity to devices and third party-applications. Because of the controlled flight routes, facial-blurring algorithms, and the deletion of human error, FlyNex has so far received 100% compliance on a multitude of remote inspection, documentation, and data acquisition activities – that achieve cost reduction up to 90% compared to manual work.

Clients like Deutsche Telekom and enviaM save significant amounts of money by using the FlyNex automated drone solution for routine inspections of industrial structures like premises, facilities or power grids for potential damages and malfunctions to prevent costly system blackouts.

FlyNex joined the EIT Digital Accelerator in 2020 to expand its market growth. In a matter of months, EIT Digital was able to get FlyNex in conversations with tens of big corporates. They all saw the potential of having a compliant system to automated expensive manual activities while improving data-quality and outcomes in the process.

Andreas Dunsch, Co-Founder and CEO of FlyNex, commented: "Considering the rapidly changing environment of developing solutions for digitising industrial processes, it is a big plus to work with an external team familiar with the stakes at risk of b2b company building. EIT Digital helped us to focus on getting things out on the market and not to lose focus on business development."

www.flynex.io

The EIT Digital Accelerator supported these companies with market expansion and customer acquisition, resulting in several deals with international customers.

In addition to the regularly admitted portfolio scale-ups, three companies came through the EIT Digital Challenge 2020. Two of them were awarded the main prize – a full year of international growth support from the EIT Digital Accelerator – and hence joined the portfolio. They are SwipeGuide, a Dutch scale-up offering intelligent work instructions and procedures via augmented apps to improve productivity on factory floors, and Wishibam, French company enabling retailers to create scalable marketplaces based on real-time store inventory.

The third company, SentiOne from Poland – an omnichannel social listening and customer service automation platform – was among the Challenge finalists. All three companies will be supported by the EIT Digital Accelerator during 2021 with access to finance and access to market.

Oculavis

German company oculavis develops the oculavis SHARE augmented reality (AR) software, which delivers remote expert support for machine manufacturers and plant operators via smart glasses or tablets and mobiles.

Founded in 2016, the company has grown quickly to employ more than 60 people. Its international team consists of development engineers, scientists, consultants and professionals.

With a background in the machine construction industry, oculavis's three founders embarked on a mission to transform the way industrial equipment service and maintenance is performed. Their deep understanding of the diverse requirements and challenges faced by customers has resulted in a product set which is ideally suited to the needs of modern industry.

In 2019 oculavis was awarded in the EIT Digital Challenge 2019 and joined the EIT Digital Accelerator programme as part of the prize package.

The EIT Digital Accelerator team worked with oculavis throughout 2020, opening doors to customer opportunities in the UK, France, Spain, Italy and the Netherlands. New customers for oculavis from these activities included Cisco and Engie. In addition, the company closed major new deals with Bayer, thyssenkrupp and Linde.

"With the help of the EIT Digital Accelerator oculavis got presence all over Europe. The access to European markets outside of the home country is still a challenge for scale-ups. With the help of the EIT Digital's team we could easily find new clients outside of Germany," said Markus Große Böckmann, Managing Director of oculavis.

oculavis.de

Digital Wellbeing

Innovation

Within the Innovation Factory, in 2020, the Digital Wellbeing area was the most popular one due to the EIT Crisis Response Initiative to fight the COVID-19 pandemic. A grand total of 25 Innovation Activities launched 16 new start-ups and 24 products into the market.

Birthy launched a start-up developing a device to register birth related signals like contraction frequency, duration, type, patterns and trends. WISE created start-up IDRO with a smart lactate sensing patch, using sweat as a proxy for blood through wearable biochemical analysis.

The Contractcome AI activity developed a solution to predict the extent medicines alter the heart's power to pump blood – increasing heart failure risk. 'Connected wearable devices for diagnosis and treatment of photodermatoses' created a device for sun protection and skin health, by monitoring UV exposure and skin reaction. SkinCare launched a product that allows patients to follow the evolution of their pigmented lesion and potentially book an appointment with a dermatologist.

VEIL.AI enables healthcare actors to combine and anonymise sensitive data from multiple parties in real-time without privacy risks.

SmartSound (start-up ImpossibleTechnologies) developed a safety and wellbeing product for elderly care and home care. FREJA (start-up Home Care Automation) created an automatic hygiene assistant to deliver increased independence for elderly and disabled people. Lettsay introduced a conversational technology product for people with speech & communication disorders.

Hynnova

In mid-2020, the EIT Digital Innovation Factory launched the 'DATA against COVID-19' initiative, with the objective of quickly developing digital technology to fight back at the pandemic. Arianna Safe Care is a successful example of the activities supported by the initiative.
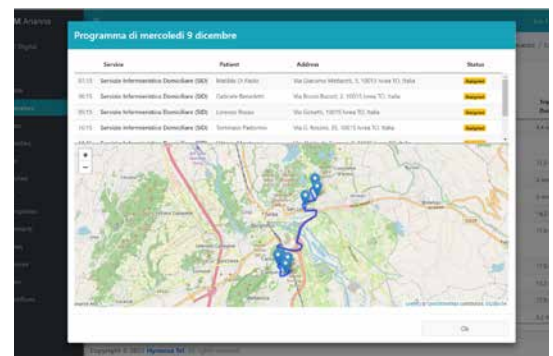
Innovation Activity Arianna Safe Care created the start-up Hynnova, which is set to revolutionise how home assistance and care activities are provided. The start-up has developed a platform that uses advanced mathematics and machine learning to dynamically optimise the use of healthcare spaces and resources.

The platform integrates information coming from three separate datasets: the activities to be carried out, the available resources, and the constraints to be respected. It then generates optimised work-programmes and optimal paths, maximising the time spent on productive activities and minimising downtime.

Hynnova's mission is particularly relevant in the current context, the spread of COVID-19 is pushing healthcare systems to operate as much as possible in a decentralised manner. Large gatherings and hospital queues need to be avoided.

Vivisol, one of the main European groups operating in home care, became Hynnova's first customer. Hynnova also developed another solution to manage and optimise vaccination campaigns. ASL Torino 4, the Italian local public health company serving the Metropolitan city of Turin's northern area, signed a contract with the start-up to use both the resource allocation platform and the vaccination campaign solution.

www.hynnova.com

Arianna Safe launched start-up Hynnova, a management system for home caregivers. The service has turned out to be especially relevant in planning COVID-19 vaccinations. 'Patient monitoring system' created start-up Entremo, with a monitoring system to help non-intensive care. 'Don't Leave Us Behind' created a start-up Elpis with a telerehabilitation solution for children and young adults with intellectual disability to overcome inaccessibility. PROTECT introduced a product for remote patient monitoring solutions allowing health care providers to monitor COPD patients. ViruSurf introduced Covid-19 genome sequence data aggregation platform for hospitals for early detection of virus variants. The Trace4Safe start-up launched a contact tracing solution tailored to large complex industrial sites and office spaces. 'Hybrid contact tracing monitoring' introduced a tracking & location system for social distancing in manufacturing.

Four special activities introduced physical tokens for tracing contacts between infected and exposed persons. The physical tokens complement the smartphone-based tracing apps and help re-open society and businesses. The activities were conducted in Italy,

Contact tracing system using physical tokens

In 2020, in the wake of the COVID-19 pandemic many European countries launched smartphone-based contact tracing applications to track and break the chains of transmission of the disease.

Unfortunately, user adoption remained well below expectations, as privacy concerns prevailed. Another cause for this relative failure, was that tracing apps were often not well integrated with the other measures to fight the pandemic.

EIT Digital therefore initiated and supported the development of alternative European tracing technologies based on physical tokens. Tokens are small, robust, cheap, and consume little energy. Their single application, and the fact that they are not 'always on' allow for high levels of security and privacy protection.

Since mid-2020, the organisation has supported four European initiatives testing token-based tracing systems in the Nordics, Benelux, Italy, and UK. The resulting solutions have been deployed at constructions sites, stadiums, schools, offices, and factories. Testing locations included the Philips stadium in Eindhoven, Netherlands, a construction site in Chile, the Otava building site of YIT Construction in Finland and the premises of the KALIX Tele24 call service company in Sweden.

Each of these token-based tracing systems is different in terms of technology choices and the market segment addressed, but they all can be used to closely monitor possible local outbreaks and react fast to prevent substantial restrictions.

The activities also created four different start-ups to commercialise their products: PROTECTEU for Italy, TokenMe for Benelux, Nordic Token for the Nordics and Waire Distribution for the UK.

The Netherlands (Benelux), Finland (Nordics), and the UK. Four start-ups were created, namely PROTECTEU srl, TokenMe B., Nordic Token Oy and Waire Distribution Ltd.

Nine start-ups have been created under the RIS Venture Program 2020 in Digital Wellbeing, covering seven countries in Europe. Some of them have already raised additional funds: Amygdala Health, registered in Estonia, Revolab in Lithuania and CIRECO, with its product Optifood, in Slovenia.

The online DeepHack 'Data Against COVID-19' was organised in May to develop data-driven solutions for epidemic and pandemic lifecycle management. It attracted 79 participants from 11 countries. The winning team developed a serious game to show players how the COVID-19 infections were spreading. Some of the DeepHack teams were later supported by the Innovation Factory.

Digital Wellbeing

Education

Education and skills needs in the Digital Wellbeing focus area are covered by several EIT Digital Master School programmes that provide general education on Embedded Systems, Data Science and Human Computer Interaction and Design. Development of secure embedded systems is very important for the development of digital medical devices, and it is one example of the online courses included in EIT Digital's blended education.

Perhaps more than in any other digital discipline, the human touch is critical to the success of Digital Wellbeing applications. A case in point is the alumni scale-up Entremo which was co-founded by several EIT Digital Master School students during the second year of their master's. The start-up provides a tool to measure vital signs of multiple corona patients at the same time to save nurses time and at the same time secure their safety. The students also received €500,000 co-funding from EIT Digital and partners.

Entremo

EIT Digital Master School students launch start-up to support medical staff with remote monitoring device

The start-up Entremo, co-founded by EIT Digital Master School students, deployed its first product, a wristband to remotely monitor vital signs of patients, in hospitals and nursing homes in Hungary.

The venture was launched within six months after an initial meeting between the five founders. CEO Peter Lakatos graduated in 2020 from the dual degree EIT Digital Master School programme in Data Science, Márton Elod studied Human Computer Interaction and Design, and Miklós Knebel graduated from Autonomous Systems. Levente Mitnyik still studies Embedded Systems and Peter Danos is finalising this year his studies on Visual Computing and Communication.

Earlier in 2020, the team won the prestigious European Commission #EUvsVirus hackathon in the healthcare category with a prototype of their 3D-printed remote monitoring device. Motivated by their success, the five joined up with four international partners – ELTE-Soft, MOHAnet and Eötvös Lorand University from Hungary and InnoTractor from the Netherlands – and submitted a successful proposal to the EIT Digital Innovation Factory's "DATA against COVID-19" initiative. The activity received €500,000 support from EIT Digital and launched their start-up, Entremo. Today, the company already engages more than 20 people.

In December 2020, Entremo deployed their main product, a wristband to remotely monitor the vital signs of patients, in hospitals and nursing homes in Hungary. The watch can measure vital signs of patients and enables nurses to safely monitor multiple patients at the same time via an online platform. A great relief during stressful periods like the current COVID-10 pandemic.

www.entremo.com

The EIT Digital Industrial Doctoral School works on leading applied-research projects, in which digital technologies bring a real impact to the quality of life, health and wellbeing. The current projects focus on: behavioural changes (increasing personal awareness through sensors, wearables, data analyses and assessing the economic impact of healthier lifestyles); and support to chronic ailments (detection of early signs of depression, supporting cancer treatment, improving quality of life and addressing autism syndromes, from early detection and early-stage therapy to supportive life-long therapy). In 2020, two open PhD positions on Wellbeing were filled.

EIT Digital staged three online Summer Schools within the Digital Wellbeing focus area: 'e-Health Personalized Prevention', "Data Visualisation and Connectivity for Healthcare' and 'Healthy Lifestyle and Behavioural Change'. Each school had, on average, 30 participants working on business challenges in teams of five. In total, approximately 20 business cases were developed from the industry (including EIT Digital partners).

The Summer School 'Healthy Lifestyle and Behavioural Change' in Eindhoven particularly excelled in the implementation of the online format via studios and a control room to improve the digital experience among the participants. This summer school also succeeded in involving partners from the EIT Digital industrial ecosystem. In fact, Combating Child Obesity (cross-KIC innovation activity), GreenHabit and IDRO challenged the learners to come up with innovative solutions to either fight child obesity, trick an addictive brain or use sweat as a proxy for blood analysis.

EIT Digital Summer School inspires business

Participants of EIT Digital's Digital Wellbeing Summer School in Eindhoven managed to impress business case owners with their solutions – and were promised by all contributing companies that their ideas will be further examined.

Lars Mulder, venture creation lead of EIT Digital start-up Combating Child Obesity asked two summer school teams to surprise him with solutions using cognitive behavioural therapy (CBT) to fight child obesity. Team Lola pitched a smart lunchbox connected to a mobile game. Mulder said he will be using elements of the business solutions in his business. "I am going to rethink my business model based on the ideas I heard there."

The start-up IDRO focuses mainly on sports and plans to examine the health market in 2021. At the summer school he got the chance to research the health opportunity of sweat analysis. One team chose to deep dive into using sweat analysis for the prevention of sepsis. That solution impressed Maarten Gijssel, managing director of IDRO. Early detection of sepsis can save lives. "The business case is of value to me."

Chantal Linders, CEO of the vitality training company GreenHabit also got inspired. Two teams came up with digital intervention solutions that aim at combatting addictive behaviours with serious games. One of the solutions was a virtual assistant that helps to withstand cravings with the support of a community of peers. The other idea was based on a physical green ball competition that could turn cravers into heroes. Linders said: "I like the offline component very much in this solution. This is a fancy way of collecting data."

Digital Wellbeing

Acceleration

Within the Digital Wellbeing focus area, in 2020, eight Digital Wellbeing companies were supported in the EIT Digital Accelerator programme, focused on improving the quality of life by sensing and data analysis. Several of them joined the programme in 2019 and continued their journey in 2020.

SidekickHealth

SidekickHealth (Iceland) specialises in creating gamified digital therapeutic solutions and programmes, transforming chronic and lifestyle disease management across multiple therapeutic areas, ranging from diabetes to ulcerative colitis and smoking cessation.

In 2019, the company was among the winners of the EIT Digital Challenge and, as part of the prize, joined the EIT Digital Accelerator programme in the following year to boost its international growth.

With the support of the EIT Digital Accelerator's fundraising experts, the company launched its fundraising process in 2020 and successfully closed Series A at €17 million. The investment round was led by Wellington Partners (Germany) and Asabys Partners (Spain), with participation by existing investors Novator (UK) and Frumtak Ventures (Iceland).

"The EIT Digital Accelerator team delivered critical support during this process and was key in the successful closing of our fundraising: in addition to providing invaluable feedback and advice, their systematic management of the process and coordinated efforts allowed us to meet with all the right investors from across Europe in a very short period of time," said Dr. Tryggvi Thorgeirsson, CEO and Co-Founder of SidekickHealth.

Sidekick will use the proceeds for validation and development into new therapeutic areas, as well as to drive product development forward to increase its lead in patient engagement and retention, and to further position itself as the preferred provider to expand pharmacotherapies. The company will also focus on continuing to improve health outcomes with other healthcare stakeholders.

sidekickhealth.com

All of them had already brought to market significant deep tech innovations, and during the pandemic year, many of the portfolio companies developed solutions to support healthcare authorities and COVID patients in coping with the impact of the pandemic. EIT Digital Accelerator has been supporting these companies by reaching targeted healthcare providers and with raising venture funding.

For instance, Swedish company OpenTeleHealth developed a remote health monitoring solution 'COVID-19 Telemedicine' which helps increase available healthcare resources by streamlining patient monitoring. This solution allows nurses to process an average of 50 patients an hour, significantly increasing staff/patient ratio and eliminating the face-to-face interaction, thus reducing the risk of getting infected.
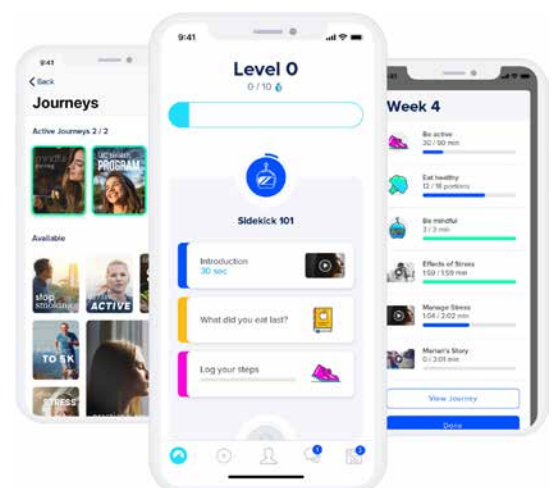
Another Nordics-based company, SidekickHealth, has leveraged its existing digital therapeutics solution for managing chronic diseases to help authorities remotely triage and manage infected individuals in their homes. Meanwhile,

the company was in the process of raising Series B funding, which was successfully closed at €17 million with the support of the EIT Digital Accelerator team.

In addition, connected telemedicine cabin developed by supported company Tessan, offered a possibility to do medical check-ups without visiting hospitals. The cabins are equipped with essential medical devices and are remotely controlled by a doctor to provide precise measures for diagnosis, for example, to assess if a patient has a respiratory infection, fever and acute fatigue – common symptoms for COVID-19.

Another scale-up, Corehab (Italy) offered their digital health platform to enable physiotherapists continue rehabilitation of their patients remotely. Thanks to wearable medical devices, physiotherapists could monitor the patients' movements, measure progress and encourage patients to comply with treatment recommendations from the comfort of their homes.

Corehab

Italian company CoRehab developed a clinically endorsed platform that empowers rehabilitation professionals and trainers to care for their patients. The platform comprises of three parts: Riablo, a system that utilises biofeedback exercise to empower motor control and coordination; Check In Motion, an easy assessment tool for the whole body with repeatable measurements; Back in Action, a complete test for ACL and lower limbs with normal data.

Earlier CoRehab had already been part of the EIT Digital ecosystem and in 2013 it also received the EIT Venture Award as Europe's most innovative start-up. In 2015, the EIT Digital Accelerator shifted its focus from early stage start-ups to growth stage scale-ups. Since then, CoRehab has followed an independent path of product and business model consolidation, creating the conditions to re-kindle collaboration with EIT Digital at the turn of the decade. In 2020, CoRehab re-joined the EIT Digital Accelerator to grow its business in Europe. This collaboration allowed them to create new international links and extend the network of distributors.

"The EIT Digital Accelerator's team was able to open doors to multiple potential customers and corporate partners, something that would have required years to create internally. Also, being part of the Accelerator has helped us to be aware and explore new finance and investor opportunities, without worrying about scanning the market on a daily basis," said David Tacconi, CEO and Co-Founder at CoRehab.

www.corehab.it

Digital Finance

Innovation

Within the Innovation Factory, in 2020, the Digital Finance portfolio included 10 activities covering different aspects of the industry, delivering 10 new products and four new start-ups.

PeasyPay

PeasyPay is a start-up launched by EIT Digital within the Pay-with-a-Smile innovation activity. It lets people pay in stores by just showing their faces and taking a picture of the palm of their hands.

The system was first rolled out in Budapest and later piloted in 25 proximity shops in the city of Guadalajara, Spain. More pilots in Slovenia and the UK are planned.

The PeasyPay solution is composed of three elements: a smartphone application for the customer, another app for the merchants, and the payment terminal.

Digital profiles of the customers' palms and faces are created through the app (available on both Android and iOS) by taking a selfie and a picture of their palm with their mobile's camera. Afterwards, the users must register their bank card details on an integrated, secure payment gateway.

The merchants use a special POS machine, equipped with cameras and facial recognition software, to scan customers' faces and palms and compare them to the biometric template created in advance.

In the case of a match, the payment is authorised, and the amount charged to the credit card registered in the payment gateway of the corresponding PeasyPay account.

The PeasyPay system has been designed to be fully compliant with all European regulations, especially GDPR and national data protection laws.

Another factor that makes the start-up's technology stand out from the competition, is that other payment solutions are fully dependent on a proprietary infrastructure and ecosystem, whereas PeasyPay is based on an open system; any bank and any merchant can join.

peasypay.eu

The innovation activities in Digital Finance are focusing on improving the retail customer experience in Digital Finance, especially with payments, and support medium-sized companies in their financing processes. They have built solutions using advanced technologies like AI, biometric identification or blockchain.

The payment area has been targeted with three activities, aiming to simplify the payment process using biometric technology to authenticate the customer, through their voice (voice commerce) or image processing of face and hand-palm (Pay-with-a-Smile, promoted by the start-up PeasyPay), or even allowing the customer to get the product and leave without explicit payment (Self/No checkout).

Two activities are in the insurtech space: AIDE, which has created the start-up Bump Out! to promote a solution that uses AI and image recognition to evaluate car crash damages in the claiming process and Dronesurance, which has developed advanced algorithms to assess the risks of commercial drone flights.

In the retail space, UnionPay Dealhunter had targeted Chinese tourists using the payment provider UnionPay, but the newly created

start-up had to pivot to local commerce because of the new travelling restrictions.

Several innovation activities have been targeted at the business problems of medium-sized companies in Europe. PMEx, through a new start-up, has developed a platform to create a closed e-market to provide liquidity to equity investment in non-listed companies. A blockchain has been used by the start-up Zertrace to support trusted certificates between companies doing business through a transparent model. CHRES has developed a platform, based on advanced dynamic hedging algorithms, to allow medium-sized companies to cover the currency exchange risks, that was previously only possible for very large companies. AIMS has proposed an innovative platform, supported by a blockchain, to use movable assets as collateral to finance SMEs.

Several start-ups have been incorporated in Digital Finance under the RIS Venture Program. RestPay in Poland has developed an innovative application for payments in restaurants and have already attracted additional investments. Start-up Omnio in Bulgaria has developed an AI solution for the regulatory technology (RegTech) space.

The online DeepHack 'Digital Technology for Charities' was organised in December to streamline processes and administrative tasks of charity organisations. It attracted 35 participants from 14 countries. The winning team developed an integrated portal to help charities receive and manage funds.

AIDE
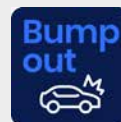
The car insurance industry is under pressure to provide better customer service in the unpleasant event of a car crash, while improving its cost efficiency. Advanced technologies like artificial intelligence or image processing are helping to solve that dilemma.

The AIDE – Artificial Intelligence Damage Estimation – innovation activity has developed a software tool that provides an instant estimation of the car damages after an incident, by analysing the images taken by customers with their smartphone.

The system has two main elements. The first is the front end, a user-friendly interface that guides the person to take the right pictures of the crash through an interactive process. The second is the back-end engine, that uses image recognition and machine learning techniques to provide the initial damage estimation.

The key element in the tool is the learning process. The artificial intelligence engine has processed thousands of annotated images to be later able to identify in the new pictures provided the type and scope of the damaged car parts.

A new start-up called Bump Out! has been registered in the Netherlands to bring the product to market and maintain and improve the tool. The target market are car insurance companies that want to integrate the tool into their claiming process, simplifying the steps for the user to fill in the claim.

Bump Out! has deployed a first pilot in its home country and plans to develop the market initially there and approach Italian insurance companies as a second step.

bump-out.nl

Digital Finance

Education

Education and skills needs in the Digital Finance focus area are covered by several EIT Digital Master School programmes. Technologies like machine learning, data analytics, biometrics or blockchain are creating new possibilities to address credit and risk management, identity management, information security, secure payments or portfolio management. In this respect, the new programme in Fintech launched in 2020 provides students with the right skills and competences to link together these digital technologies with finance. In addition, programmes such as Cloud Computing, Cybersecurity and Data Science provide education in topics like model checking and system validation which are key to addressing the Digital Finance area.

The Industrial Doctoral School develops applied-research projects for a creative reshaping of digital finance services for better, faster and more secure solutions to improve the customer experience using deep tech. The topics focus on: the future of retail banking (improving customer relationships, a cashless society and micropayments); modernising corporate banking and insurance tech (point-to-point (P2P) risk distribution, the digitalisation of equity capital markets, cybersecurity and blockchain); and digitalising wealth asset management (artificial intelligence and machine learning for investment decisions). In 2020, four PhD thesis proposals on Fintech have been approved and all positions have been filled.

New Fintech master's to boost a strong digital Europe

The EIT Digital Master School launched in September 2020 the new Fintech master's programme with the aim to educate new innovators and entrepreneurs in this field.

Because technology developments evolve rapidly, "We review our programme offer annually to stay relevant and offer the best education possible to prepare students for the tasks ahead," said Andrea Paoli, the head of the EIT Digital Master School.

"The increasing expansion of the financial industry, the growing demand for fintech experts, and the need for an applied programme in this field were strong reasons to develop this Fintech master's," explained Alvaro Pina Stranger, Fintech Programme Lead. "The Fintech master's aims to train a new generation of entrepreneurial computer scientists who will be able to cover this important niche and positively impact society."

Students learn in-depth theoretical and technical skills, like software development, database security and big data management, processing and storage. On top of that, they learn commercial skills to turn technology into business.

The first year of the two-year master's programme can be taken at the Université Côte d'Azur and Université de Rennes 1 in France, Universitá de Trento and Politecnico di Milano in Italy, Eötvös Loránd University (ELTE) in Hungary and Universidad Politécnica de Madrid (UPM) in Spain. The specialisation year can be completed at the Université Côte d'Azur, Université Rennes 1, Universitá de Trento or ELTE.

EIT Digital held one Summer School in the Digital Finance focus area: Machine Learning for Financial Data. It had 41 students, including eight external participants.

EIT Digital held two online Summer Schools in the Digital Finance focus area: 'Machine Learning for Financial Data' and 'Disrupting Finance with Digital Technologies'. Each school had, on average, 30 participants working on business challenges in teams of five. In total, approximately 10 business cases were generated from the industry (including EIT Digital Partners).

E-Group provided use cases generated from one of the EIT Digital Innovation Activities. PeasyPay for instance, a multimodal biometric-based digital payment solution for in-store payments, was provided to the summer school 'Machine Learning for Financial Data'. On the other hand, the summer school 'Disrupting Finance with Digital Technologies' focused on a variety of use cases related to crowdfunding, payments-without-borders, trust in charity.

Blockchain technology is also the topic of two of EIT Digital Professional School courses. These are Blockchain for the Decision Maker and Blockchain for Digital Manufacturing and Logistics. Both are developed in collaboration with EIT Digital's partner Budapest University of Technology and Economics.

Improving stock price prediction

Giuseppe Matera is out to disrupt the global investment community in the same way as e-commerce changed shopping and Uber did with transport. Matera started to research this topic in 2020 while doing an EIT Digital industrial doctorate at Actelligent and the University of Edinburgh. Matera is about to set a new investment process paradigm in adopting a Man + Machine strategy.

When making investment decisions, investors now need to look into large amounts of unstructured data. They go through hard data such as stock prices, trade volumes, company financials, and they read research reports, news articles and review commentaries from various sources. With machine learning and big data analytics, there is an opportunity to use sentiment analysis to save time for investors to make informed decisions.

Data is the lifeblood of the 'third wave of investing' in the finance world. Actelligent's view is that a new investment process paradigm can change asset management the same way e-commerce changed shopping and Uber changed the transportation experience.

Actelligent started working on generating signals based on company-specific reports, using the so-called BERT model. This project will extend the previous approach by incorporating each company's related network of companies.

The ultimate goal of this industrial doctorate would be an application that helps investors to look at sentiment indicators in one instance, thus strongly enhancing the efficiency of investors. You will improve the accuracy of stock price forecasts by using the supply chain network between companies, as well as that of the boards of directors using machine learning and big data analytics.

Digital Finance

Acceleration

Aligned with the Digital Finance focus area, the EIT Digital Accelerator supports European scale-ups that are driving the digital transformation of the financial industry.

CashDirector

Polish scale-up CashDirector offers an AI-based Digital CFO solution designed for SMEs that integrates with any bank's online channel, allowing them to provide financial management services to small businesses at an affordable price.

Through CashDirector, banks obtain valuable touchpoints and leads, can accurately evaluate risk and offer personalised on-demand products in an efficient manner. The Digital CFO platform also allows business owners to save time by automating daily finance management, understand their cash-flow needs in real time, and interact online with their bank to balance short-term deficits or get funding for a business opportunity.

CashDirector was identified by EIT Digital through its flagship pan-European competition for deep tech scale-ups in the digital space, the EIT Digital Challenge. The company was among the 25 finalists in the 2019 edition of the competition. It then joined the EIT Digital Accelerator, where the team of financing experts began to work with CashDirector in preparing, launching and organising a fundraising round. This support resulted in €3 million Series A funding led by one of the largest Polish Investment Funds, EEC Magenta.

"The EIT Digital Accelerator delivered invaluable support during the fundraising process: in addition to providing critical feedback and advice, their coordinated efforts allowed us to meet with key venture capital and corporate venture capital funds from across Europe in a very short period of time," said Patrycja Strzelecka, CCO and Co-Founder of CashDirector.

cashdirector.com

In 2020, the EIT Digital Accelerator supported five Digital Finance scale-ups from Germany, Poland, Sweden, France and the United Kingdom.

Three companies entered the Accelerator after participating in the EIT Digital Challenge 2019. For instance, Minna Technologies, a Swedish company providing a subscription-management platform for retail banks, and French company Zelros offering AI solutions for augmented insurers were awarded second and first place respectively and joined the Accelerator programme as part of their prize package. Both companies have been focusing on international expansion and received access to market support from the Accelerator team.

Polish company CashDirector – an artificial intelligence enabled Digital Chief Financial Officer (CFO) for small to medium enterprises – was among the finalists. The EIT Digital Accelerator has been supporting CashDirector in preparing, launching and organising a fundraising round, which resulted in €3 million Series A funding led by one of the largest Polish Investment Funds, EEC Magenta. Using the new investment, the company is working on further international expansion and product enhancement.

The other portfolio companies within the Digital Finance focus area have entered the Accelerator programme via the regular admission process. They offer innovative solutions for the financial services sector. For instance, UK-based Neotas leverages a variety of data from open sources, social media, deep and dark web to deliver insights that help customers dramatically reduce customers' risk of fraud, money laundering and bad hires.

German company United Signals digitalises all paper documentation through its white-label multilingual solutions for digital onboarding, electronic contracts and client portals. The solution is already used by leading banks in Germany (incl. DAB BNP Paribas, V-Bank, comdirect) and has been selected by the Association of Independent Asset Managers to become a new market standard.

Neotas

London-based company Neotas is an online due diligence provider for financial services that harnesses social media and hidden deep web information to deliver insights that dramatically reduce customers' risk of fraud, money laundering and bad hires. Neotas joined the EIT Digital Accelerator in June 2020 to expand its international footprint and have been supported with access to market and access to finance.

Neotas uses a powerful blend of machine learning and natural language processing techniques to analyse a company's or an individual's 'digital footprint' through publicly available information or 'open sources', providing advanced intelligence while safeguarding privacy.

Founded in 2017, Neotas has already acquired more than 80 customers from across the financial services sector. Flagship clients and partners include some of Europe's most prominent banks and the world's biggest private investigation and risk management organisations. Neotas was recently selected for ING Labs, chosen as a finalist in UBS Future Of Finance Challenge, and it also won a place on the Accenture Fintech Innovation Lab.

"EIT Digital Accelerator has helped us open doors with major enterprise accounts in Europe in a very short space of time, which would ordinarily take a year or two," said Vipul Mishra, Co-Founder of Neotas. "The EIT Digital Accelerator team is very experienced in sales and investment, making the business process very smooth, agile and productive for our company, potential clients and investors. It has been the best time and money investment that we have made in terms of positive returns for our business."

neotas.com

Pan-European
ecosystem

BERLIN
## Germany, Austria, Czech Republic, Poland

While the speed of transition has been slowed down by the COVID-19 challenges, EIT Digital's Berlin Node is well positioned for its next phase.

A new set-up for the Berlin office and the German legal entity has been established and is fully operational for the time when pandemic-related restrictions are lifted. Opportunities exist especially in the context of the rapidly developing start-up ecosystems, not only in Berlin and other German locations, but also in the connected countries of the Regional Innovation Scheme (RIS).

In Germany, the relevance of digital technologies has experienced a boost as a result of the corona crisis and the expected post-Covid economic recovery will provide significant opportunities for an accelerated evolution for all of the EIT Digital focus areas.

After successfully navigating through a challenging year, EIT Digital Germany is ready to further develop its partnerships, especially in its connected RIS countries, and to engage in new collaborations with supporters and investors, to be a strong partner for a further accelerated digital transformation during the economic recovery after the COVID-19 pandemic.
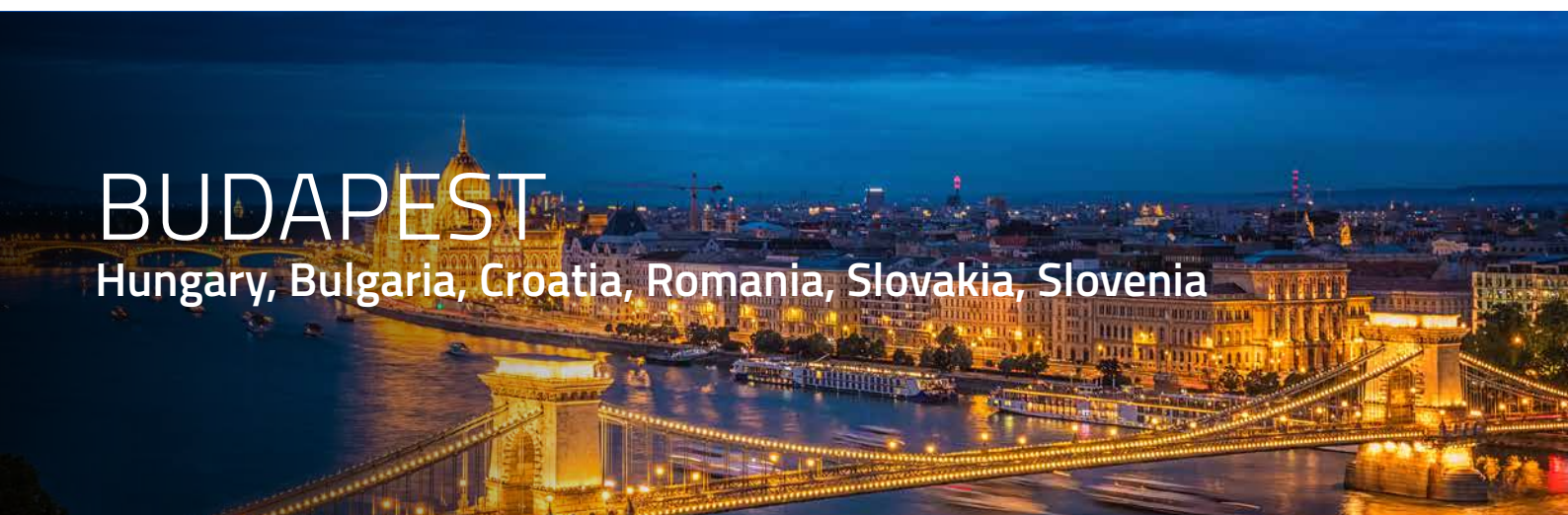
BUDAPEST
Hungary, Bulgaria, Croatia, Romania, Slovakia, Slovenia

2020 was about solidification and further growth. By attracting new partners, the Budapest Node strengthened its regional reach and expanded its footprint in both academia and industry.

As of late 2020 the Budapest Node ecosystem consisted of 27 partners (universities, a research organisation, large industry partners, medium enterprises, and small innovators), in total from five countries (Bulgaria, Hungary, Romania, Slovakia and Slovenia). A significant effort was spent across the year to integrate the new partners in the EIT Digital ecosystem and facilitating their participation in our ongoing activities. Most of the partners who joined in previous years continue to be active in at least one of the three pillars of our mission.

The Budapest Node regularly mobilises its ecosystem and the innovation ecosystem in its reach by organising high-impact events. In 2020, the Budapest Node organised 24 public events (online and offline) that hosted over 700 external participants (mostly online). Some of the highlights were the Summer School on 'Machine Learning for Financial Data in Digital Finance', the EIT Digital Master School Kick-off, and the DeepHack Hackathon organised in December, attracting students from across Europe.

EINDHOVEN
Netherlands, Belgium, Luxemburg

In 2020, the Eindhoven Node set important goals for the near future. The foundations for the Satellite in Antwerp were laid and admissions to the EIT Digital ecosystem grew substantially with 20 new members from the Benelux, an increase of 82% relative to 2019.

During 2020, the Eindhoven Node attracted 18 new industrial members: DialogueTrainer; Grendel Games; Pharmi; Nobleo Intelligent Solutions; Nobleo Autonomous Solutions; Tractebel Engineering; Greenhabit; SAI; Stichting Health Base; AM-flow; IDRO; Onera; SARA; CityBeamer; Start it @ KBC; Intermodalics; Farmad and ITOM. Right from the get-go, those new members are engaged in innovation activities.

By the end of the year, EIT Digital had 53 partners in the Benelux region; five universities, three research centres, one NGO and 49 industrial organisations, of which 28 were SMEs. Most partners showed strong commitment to our activities for entrepreneurship, innovation and education, with a fitting participation in our Call for Proposals for 2021.

HELSINKI
Finland, Estonia, Latvia, Lithuania

For the Helsinki Node, 2020 was characterised by growth and expansion of the ecosystem, welcoming new partners from Finland, Estonia, Latvia and Lithuania to the EIT Digital ecosystem.

The Helsinki Node focused on broadening its footprint by connecting more industrial partners from Finland and the Baltics. It welcomed nine new partners (University of Eastern Finland, TAMK, ABB Estonia, Startup Wise Guys, TietoEvry Estonia, Ikune Labs, Efektas Group, Guardtime OÜ and Vireum Oy), out of which seven are industrial partners. The expansion in the Baltics is building a strong foundation for the future Tallinn Satellite.

During 2020, the Helsinki Node organised 25 events such as Lunch Talks, Talent Match events for students, and investor events with over 800 participants. Several events targeted EIT Digital Master School students, bringing them to the Co-Location Centre community and thus helping them in their studies. As a highlight, the Talent Match in October brought together 16 companies with 70 students looking for internships. The Helsinki Node created a closer relationship with seed and angel investors to support EIT Digital venture creation in the Innovation Factory. Two events (Nordic Venture Standup Event and EIT Digital Investor Day) were tailored to bring together EIT Digital start-up activities and investors. The Helsinki Node continued the successful series of Digitally Circular events organised together with EIT RawMaterials and EIT Food.

LONDON
United Kingdom, Ireland

In 2020 the UK technology sector continued to develop strongly notwithstanding the uncertainties posed by the Covid-19 pandemic and Brexit.

Thirty-five industrial organisations and universities from across the UK were approved to join EIT Digital's ecosystem as new partners in 2020 – all participated in one or more EIT programs and all attended multiple events from the events program.

During 2020, the UK Node successfully completed the process of integrating the satellite office in Edinburgh, Scotland, into EIT Digital's activities. Sixteen new Scottish partners joined EIT Digital, fourteen Scottish-led proposals were submitted to the EIT Digital 2021 innovation call, and four new Scottish technology start-ups will be incorporated in early 2021 as a result of EIT Digital participation.

At the end of 2020, the London Node of EIT Digital incorporated the EIT Climate-KIC into its Co-Location Centre in Central London to establish a combined physical space which will enable closer cross-KIC collaboration to identify and deploy digitally enabled responses to the challenges of climate change.

MADRID
Spain, Portugal

2020 was the year of ecosystem consolidation and deeper integration of all stakeholders into the Node activities.

On the innovation front, 2020 saw the launch of 13 innovation activities with involvement and deep engagement of our Spanish partners. In six of these innovation activities, they took the lead. These efforts show the real value provided by the Madrid Co-Location Centre for collaboration, engagement, and inspiration. On the education front, the node has continued with the Master School and Doctoral School activities, offering support to all students affected by the pandemic situation.

The Madrid Node has also seen a great increase in activity levels and impact: performing its business acceleration activity, consolidating its access to finance services, coaching six new companies.

The Spanish partners already included the IMDEA Software Institute, UPM, ATOS, Indra, Ferrovial, Telefonica, Innovalia, CI3, INESC-TEC or DTX Collab, to name a few. In 2020, some new relevant industrial and entrepreneurial partners joined: Liberbank, Consultora de Telecomunicaciones Optiva Media, Geomotion Games, MOG Technologies, HOP Ubiquitous, Robotnik Automation, CITIES FORUM, Infoport Valencia, and Integrated Systems Design and Development, among others.

PARIS
France, Switzerland

EIT Digital and its French partners turned 2020 into a great year for digital innovation and deep tech start-up creation in Europe.

The Paris Co-Location Centre (CLC) took advantage of France and Switzerland's exceptional digital dynamics to reinforce EIT Digital's role in Europe.

In 2020, EIT Digital's Paris Node hosted around 120 events involving more than 3,000 businesspeople, entrepreneurs, venture capitalists, researchers, students and individuals from public organisations. The Paris Node strengthened EIT Digital's interactions with investors, organising events involving 60 venture capitalists.

With a total of 43 French partners, EIT Digital continued to enhance the attractiveness of its offering. It welcomed five new industrial partners – including major companies like the Swiss private bank Lombard Odier, and innovative start-ups like LMAD, Soben and Ai Square Connect in the domain of artificial intelligence (AI) and autonomous robotics. These partners appreciate the innovation activities of EIT Digital's European ecosystem, the business collaboration between European scale-ups and major companies and the access to talent.

STOCKHOLM
Sweden, Denmark, Iceland

The Stockholm Node of EIT Digital continues to expand in the Nordic data-driven innovation ecosystem with a larger industrial footprint.

Since 2019, students and tech entrepreneurs have started companies that shared equity with EIT Digital. In 2020, the Stockholm Node built on the long-term relationships with early-phase investors that were established for EIT Digital's start-ups. In parallel, the Node brings forward many Master School graduates to meet the high demand for advanced digital talents in the ecosystem.

In 2020, the Stockholm Node added five new partners to the EIT Digital ecosystem; advanced Swedish SMEs that are interested in innovation collaboration and the entrepreneurial deep-tech talent derived from our Academy. The collaboration between the Stockholm Node and its partners developed further as investors became increasingly interested in opportunities with Node partners' entrepreneurial teams, EIT Digital ventures and Accelerator scale-ups.

The Stockholm Node organised and hosted 20 events, mobilising more than 640 participants from partners and the vibrant local digital ecosystem. Events included an AI conference, on site before COVID-19 restrictions, and a Venture Standup Event, where early-stage investors met start-ups from our innovation activities.

TRENTO
Italy, Cyprus, Greece, Malta

In 2020, the Trento Node of EIT Digital further developed its ecosystem and activities to support EIT Digital's mission and vision for a strong digital Europe that is inclusive, fair and sustainable.

While being well rooted in the local territory, the Trento Node is increasingly engaging with Europe-wide activities. As an example, in 2020, the Italian Node and its partners were very active in launching new initiatives to support the deployment of data-driven solutions to fight the COVID-19 pandemic. Increasingly, activities at a national level have a European-wide impact and contribute to bridging the gap between research and the market to create new digital ventures that have Europe as their domestic market.

In 2020, the Trento Node further developed its ecosystem by welcoming 16 new partners from Italy, Greece and Cyprus, reaching a total of 58 partners by the end of the year.

The Trento Node also supported actively the execution of the RIS Venture Program, especially the Eastern Balkans regional edition (covering Greece, Romania, Bulgaria, Albania and Cyprus) which attracted 60 participants and led to the creation of six ventures.

SAN FRANCISCO
SILICON VALLEY

Since its establishment in 2014, the EIT Digital Silicon Valley Hub pursued its mission to establish a true two-way bridge between the European ecosystem of EIT Digital and the Bay Area ecosystem.

In 2020, the office focused its efforts on rationalisation of its operations and spending to benefit the organisation's financial sustainability. COVID-19 restrictions defined the type of activities and projects that the EIT Digital Silicon Valley Hub has executed in 2020.

No visits and participations of EU representatives were possible and thus less events organised by the hub. Noteworthy were events on using AI and Big Data to fight pandemics, a debate on smart cities, but also a presentation to and discussion with UN representatives on digital infrastructure and data sovereignty in times of accelerated digital transformation.

The EIT Digital Silicon Valley Hub also led several cross-KIC activities, like the EuropeSV breakfast meetings, but also a very well attended debate comparing Europe and California, and how these are advancing a green vision amid COVID-19.

COMMUNICATIONS

In 2020, the work of the communications function centred around three main targets: illustrate the uniqueness of the EIT Digital model at the intersection of entrepreneurial education, digital innovation, and ecosystem collaboration; present EIT Digital as a thought leader in the area of digital innovation, guiding the digital transformation of Europe; and contribute to the long-term sustainability of the organisation by supporting partner recruitment and retention.

To improve the effectiveness of the communication function's operations, communication team members have been working directly with EIT Digital's top management over the past year. This ensures a clear and immediate translation of the requirements and objectives of the organisation's leadership into targeted communications output.

This focused approach also allows respective communications leads to accumulate better than ever before expert knowledge about their area of responsibility and develop close professional relations with their internal and external stakeholder universe.

The communications professionals get involved in projects at an earlier stage where they can better contribute to successful communication and dissemination of the results. Giving such high priority to communications at management level not least benefitted cross-functional alignment and coherence of all communications output.

An important brand element for all 2020 communications was the organisation's 10-year anniversary. To celebrate this occasion, a special logotype was created and used throughout all communication platforms, tools and campaigns. Most notable in this respect was the publication of EIT Digital's 10-year Anniversary Book "Celebrate Innovation" and the online celebration event in late October. This event also served as a replacement to the annual Brussels conference – traditionally welcoming around 1,000 attendees in early September – and achieved 2,200 viewers of online streaming.

EIT Digital's streamlined communications strategy led in 2020 to less, yet more targeted media outreach. The communications team concentrated on outlets with a clearer relation to the organisation's core mission and highest potential to reach target audiences. This strategy helped enhance media outreach for high-priority topics, such as EIT Digital's COVID-19 initiatives, but also thought leadership contributions such as the policy perspective reports on Digital Sovereignty and Artificial Intelligence or the Makers and Shapers series, presenting 33 conversations on the future of digital Europe with leaders from business, industry and policy.

EIT Digital's social media strategy continued to apply a story telling approach to convey our message in 2020. This implied moving increasingly from unidirectional communication towards dialogues with our followers. To improve cross-dissemination and channel management, EIT Digital introduced in autumn 2020 a Single Social Media Channel policy, limiting its presence to one EIT Digital profile per platform.

Despite a difficult external environment, the results of EIT Digital's reorganised communications operations were overwhelmingly positive. Outreach efforts generated 425 traditional media articles (422 in 2019), the number of individual users on the reduced social media accounts remained stable, and more individual visitors used the website. This positive trend is expected to accelerate next year, when an entirely new and more customer-centric website will be launched.

The success of EIT Digital's integrated communications efforts and its capacity to swiftly adapt to changing circumstances is best illustrated by two indicators: albeit entirely online, the marketing campaign for the EIT Digital 2021 call for innovation and education activities resulted in a 7% increase in applications; and a record number of 403 scale-ups from 32 countries applied for the 2020 edition of the EIT Digital Challenge scale-up competition, a 44% increase from 2019.

HUMAN RESOURCES

Foster a workplace advocating diversity and teams' success in building a strong digital Europe.

2020 was a challenging and exciting year for Human Resources of EIT Digital.

To support the organisational development, EIT Digital HR strives to attract and recruit a workforce whose background and experience meet the key needs and requirements of the organisation. In 2020, EIT Digital was proud to bring on board a number of strongly motivated, diverse and committed team members, driven by their impact on the EIT Digital mission and sustainability.

The year 2020 was special for EIT Digital HR. Particular attention was paid to employees' wellbeing, overall organisational cohesion and interaction in order to address challenges and implications caused by COVID-19. Remote working impacted the initial EIT Digital priorities and objectives. The new business environment required employees to change minds and attitudes towards their way of working, communication and day-to-day delivery.

It was important, that during 2020, EIT Digital continued building on its performance-driven culture, fully supported by managers and employees. Driven by HR, EIT Digital applies a well-structured and efficient performance management process. It includes harmonisation of targets and KPIs, a transparent and consistent approach to employees' performance appraisal, ongoing feedback, as well as clear and concise communication.

Gender mainstreaming remains a priority topic for EIT Digital HR in terms of contribution to the implementation of the EIT Gender mainstreaming Policy and supporting the execution of the EIT Gender Balance Action Plan. In 2020, EIT Digital achieved further progress in attracting high potential female employees with deep technology skills and capabilities as part of its workforce and as members of the leadership team.

EIT Digital's endeavour is to maintain its unique identity, recognised by its inclusive work culture, versatile and diverse workforce. EIT Digital is committed to attract and retain people from multiple cultures, of different origins, nationalities, races and ethnicities, genders, abilities, beliefs, backgrounds and experiences. In 2020, the organisation counted 17 nationalities, 38% female representation among its workforce and 33% female representatives in leadership roles of. The gender balance in recruitment has improved since 2019, when the female representation among new hires to EIT Digital reached 40%. In 2020, a 55% female representation among new recruitments was achieved.

	2019	**2020**
Male	**60%**	**45%**
Female	**40%**	**55%**

Operational excellence remains in focus of HR. In 2020, EIT Digital successfully dedicated efforts to streamline and simplify HR operations, mainly targeted on payroll services across multiple EIT Digital locations

As part of the HR agenda in 2021, EIT Digital will further develop its workforce to strengthen the skills, expertise and behaviours required to contribute to EIT Digital excellence and sustainability. HR will continue monitoring our employees' wellbeing to provide necessary support. And the organisation will continue its efforts to implement the EIT Gender Mainstreaming Policy.

Have you been involved with EIT Digital in some capacity? Do you work in any of the EIT Digital nodes? Have you worked for one of EIT Digital's partners on an innovation or education activity? Do you teach EIT Digital students? The Alumni Foundation is there for you. Register at alumni.eitdigital.eu and access benefits such as the Alumni Directory, job opportunities (alumni.eitdigital.eu/jobs) and networking events.

ALUMNI

Without doubt, 2020 has been an extraordinary year for the EIT Digital Alumni. Along with the rest of the world, our Alumni community had to reinvent the way it meets, engages, and learns from each other. As a result, 2020 saw an unforeseen increase of innovative online events and new concepts aimed at involving the EIT Digital Alumni.

Aside from a very successful physical Volunteers Training and a Pre-Departure event in Shenzhen (China), the EIT Digital Alumni organised a series of online events around knowledge sharing – the Tuesday Afterworks. This series of events tackled topics such as Lifelong Learning, Social Responsibility in Tech, Personal Branding and Applied Machine Learning. All speakers were EIT Digital Alumni, and this format allowed for some great online peer learning.

Another highlight of 2020 was the record number of start-ups that participated in the annual Start-up Contest. Over 20 start-up companies founded by EIT Digital Alumni competed for the title, start-up of the year, and the winner, Ellure, received support from the community to further advance its business ideas. Lastly, the EIT Digital Alumni organised and participated in various online hackathons to come up with solutions to limit the spread of Covid, combat fake news with the help of AI and improve the EIT Digital Alumni website and community portal.

To better identify the needs of the EIT Digital Alumni, this year's alumni survey was carried out in collaboration with the EIT Digital Master School. This team effort resulted in a 144.2% increase in responses and will improve the support for the alumni community in the years to come. Fewer physical, in-person events meant that there was a lack of opportunities to promote the community to potential new members. Nevertheless, the alumni community grew to 2110 members, of which 998 are full alumni.

Unfortunately, 2020 also saw the cancellation of many events and initiatives and the EIT Digital Alumni's flagship event, the Annual Meeting, had to take place online. Cancelling these events undoubtedly had a big impact on the community, but the Alumni are hopeful we can pick up where we left off once the world reopens. Combining the new with the old, the EIT Digital Alumni will certainly be stronger than ever!

FINANCIAL
REVIEW

The 2020 Business Plan was assigned to 214 partners that have reported costs against 141 KIC Activities.

The Grant Agreement 2020 and associated Business Plan were signed on March 9th, 2020 for a total budget (KIC Added Value Activities and KIC Complementary Activities) of €304,595,383.00. The KAVA budget was estimated at €89,323,927.00 with a maximum EIT contribution of €71,459,141.60 or a single reimbursement rate of 80.00%.

This budget was the basis for the Internal Agreements Grant 2020 that were signed with the partners.

Following the outbreak of the COVID-19 pandemic, on 14th May 2020 the EIT Governing Board decided to allocate additional funds for activities targeting the COVID-19 crisis and its negative economic effects. On 31st May 2020 EIT Digital responded to the EIT's invitation to submit proposals and eventually was awarded €7,646,944.69 for the additional activities. This resulted in Amendment 1 of the Grant Agreement 2020 signed on 16th July 2020.

In September 2020, the Business Plan Addendum was submitted to EIT to reflect the evolution of the KIC Activities over the first eight months (as reported by the partners in their budget change requests) as well as to consolidate the changes implemented with Amendment 1 of the Grant Agreement 2020. This resulted in Amendment 2 of the Grant Agreement 2020 signed on December 21st, 2020. These budgets (against which the reporting has taken place) were €325,851,661.12 for the total budget, €98,625,729.36 for the KAVA with a maximum EIT contribution of €78,900,583.32 or a single reimbursement rate of 80.00%.

The actuals over 2020 reported by the partners on March 31st, 2021 are €305,941,760.59 or 95.5% of the overall budget, €90,036,069.09 or 94.0% of the KAVA budget and an EIT Request of €67,637,477.52 or 89.8% of the EIT Amended budget with a single reimbursement rate actual of 75.1%.

Area / Segment	EIT budget	KAVA budget	Total budget	EIT actual	KAVA actual	Total actual
1. Education	**€15,075,861.00**	**€18,356,412.60**	**€42,879,967.60**	**€12,036,794.24**	**€15,969,373.16**	**€38,228,973.95**
1.1 EIT Digital Master School (MSL)	€9,195,262.86	€11,818,052.36	€26,544,425.36	€8,213,890.75	€10,967,223.00	€24,358,871.30
1.2 EIT Digital Industrial Doctoral School (DSL)	€2.347,425.89	€2,556,159.49	€4,491,337.49	€1,260,942.01	€1,978,601.94	€3,666,506.70
1.3. EIT Digital Professional School (PSL)	€448,678.00	€597,125.00	€3,277,128.00	€338,671.36	€490,523.63	€2,509,018.05
1.4. EIT Digital Summer School (SSC)	€1,210,181.00	€1,502,762.50	€6,684,763.50	€895,521.42	€1,197,255.89	€6,358,809.20
1.5 EDS (Education Development Support)	€1,874,313.25	€1,882,313.25	€1,882,313.25	€1,327,768.70	€1,335,768.70	€1,335,768.70
2. Innovation and Research	**€34,581,217.15**	**€49,915,894.59**	**€248,253,694.35**	**€32,209,377.81**	**€49,687,006.79**	**€241,823,520.30**
2.1 TEC (Digital Tech)	€7,124,179.74	€10,390,503.25	€50,167,617.25	€6,417,137.11	€9,938,993.68	€48,500,083.90
2.2 IND (Digital Industry)	€5,270,126.72	€7,781,226.02	€50,245,036.02	€4,941,504.05	€7,633,515.86	€48,483,541.23
2.3 WEL (Digital Wellbeing)	€9,622,480.50	€14,148,069.25	€60,960,869.25	€9,113,430.14	€14,352,155.38	€61,252,129.58
2.4 CTS (Digital Cities)	€5,676,913.19	€7,860,076.07	€34,616,929.83	€5,507,070.88	€7,879,181.17	€34,104,537.04
2.5 FIN (Digital Finance)	€5,515,017.00	€8,363,520.00	€50,890,742.00	€5,140,470.24	€8,793,395.31	€48,393,463.16
2.6 IDS (Innovation Development Support)	€1,372,500.00	€1,372,500.00	€1,372,500.00	€1,089,765.39	€1,089,765.39	€1,089,765.39
3. Entrepreneurship	**€11,957,230.17**	**€11,957,230.17**	**€11,957,230.17**	**€9,288,559.38**	**€9,349,742.69**	**€9,349,742.69**
3.1 ACC (Accelerator)	€5,078,432.17	€5,078,432.17	€5,078,432.17	€3,011,947.88	€3,011,947.88	€3,011,947.88
3.2 IBD (Industry Business Development)	€6,878,798.00	€6,878,798.00	€6,878,798.00	€6,276,611.50	€6,337,794.81	€6,337,794.81
4. Management	**€10,526,600.00**	**€10,992,795.00**	**€10,992,795.00**	**€8,294,120.85**	**€8,592,318.42**	**€8,592,318.42**
4.1 MGT (KIC Management)	€4,411,500.00	€4,437,820.00	€4,437,820.00	€3,709,029.78	€3,709,029.78	€3,709,029.78
4.2 CLI (Nodes and CLCs)	€6,115,100.00	€6,554,975.00	€6,554,975.00	€4,585,091.07	€4,883,288.64	€4,883,288.64
5 Communication, Dissemination and Outreach	**€1,400,000.00**	**€1,400,000.00**	**€1,400,000.00**	**€1,223,635.21**	**€1,223,635.21**	**€1,223,635.21**
5.1 MKT (Communications, Dissemination and Outreach	€1,400,000.00	€1,400,000.00	€1,400,000.00	€1,223,635.21	€1,223,635.21	€1,223,635.21
6. EIT RIS	**€2,828,971.00**	**€3,013,877.50**	**€3,013,877.50**	**€2,622,227.25**	**€2,812,728.25**	**€2,812,728.25**
6.1 Engaging RIS players	€2,212,913.00	€2,229,587.50	€2,229,587.50	€2,045,141.68	€2,062,691.21	€2,062,691.21
6.2 Mobilizing RIS networks	€616,058.00	€784,290.00	€784,290.00	€577,085.57	€750,037.04	€750,037.04
7. Cross-KIC	**€2,530,704.00**	**€2,989,519.50**	**€7,354,096.50**	**€1,962,762,78**	**€2,401.264,57**	**€3,910.841.77**
Cross-KIC Artificial Intelligence	€154,000.00	€165,250.00	€165,250.00	€112,436.46	€123,686.46	€123,686.46
Cross-KIC Child Obesity – TI	€597,870.00	€758,085.00	€3,963,085.00	€577,675.74	€752,655.59	€1,102,655.59
Cross-KIC CLC Consolidation	€90,000.00	€90,000.00	€90,000.00	€86,463.80	€86,463.80	€86,463.80
Cross-KIC Common Outreach	€299,000.00	€299,000.00	€299,000.00	€73,745.80	€73,745.80	€73,745.80
Cross-KIC Digitized Production – TI	€139,928.00	€174,910.00	€174,910.00	€111,232.60	€143,572.63	€143,572.63
Cross-KIC EIT RIS	€5,000.00	€5,000.00	€5,000.00	€3,159.28	€3,159.28	€3,159.28
Cross-KIC Human Capital	€527,500.00	€664,500.00	€1,824,077.00	€402,037.00	€514,114.90	€1,673,692.10
Cross-KIC Resource Efficient Society	€25,000.00	€35,689.00	€35,689.00	€-	€-	€-
Cross-KIC Sustainable Cities – TI	€194,406.00	€299,085.50	€299,085.50	€185,092.30	€292,946.31	€292,946.31
EIT House	€498,000.00	€498,000.00	€498,000.00	€410,919.80	€410,919.80	€410,919.80
Grand Total	**€78,900,583.32**	**€98,625,729.36**	**€325,851,661.12**	**€67,637,477.52**	**€90,036,069.09**	**€305,941,760.59**

OUTLOOK

While writing this Outlook, the COVID-19 pandemic enters its second year and continues to impact our daily lives. EIT Digital has adapted its way of working and even though the pandemic still hampers some of our work, we are able to maintain our delivery on innovation, talent and digital skills. With vaccination programs being rolled out, a gradual reopening of societies in Europe is expected over the year, allowing us to expand our activities again to the physical world.

Our Business Plan for 2021 has been titled 'Accelerate Recovery'. Digital technology has proven essential during the COVID-19 pandemic and EIT Digital contributes with digital innovation and skills to accelerate the economic recovery of Europe. We support the European Commission and EU Member States towards A Europe fit for the digital age through making the next decade Europe's Digital Decade, including the EU's Digital Education Action Plan focussing on digital skills. EIT Digital is at the heart of this strategy and will be an active player to achieve its goals.
We continue to concentrate our activities around strategic areas that are essential for Europe's digital sovereignty: Digital Tech, Digital Wellbeing, Digital Cities, Digital Industry, and Digital Finance. Digital Tech addresses innovation in core digital technologies key for Europe, being artificial intelligence, cybersecurity and next generation networks. The other areas are focussed on the application of digital technology in crucial domains, addressing challenges and opportunities like emerging digital platforms for industry, data-driven applications for promoting a healthier lifestyle and more liveable urban environments, or the future of finance. Activities in these domains are increasingly carried out in collaboration with other EIT Innovation Communities, such as EIT Health and EIT Food in the Wellbeing domain, EIT Manufacturing in Digital Industry and EIT Urban Mobility in Digital Cities.

Contributing to enhanced diversification, EIT Digital will be the lead KIC in the EIT-EIC (European Innovation Council) pilot which aims at testing new collaboration mechanisms between the EIC and EIT Innovation Communities. This promising partnership will strengthen the European support for innovation and entrepreneurship. EIT Digital is also well connected and engages with other EU programmes, including fruitful collaborations with DG CONNECT, pursuing two major objectives: supporting the execution of our strategy by actively scouting actors and cooperation opportunities to complement our efforts in core activities, and reinforcing our leadership in the digital transformation of Europe by engaging in strategic discussions with other relevant organisations and instruments.

Our 2021 activities will be carried out under the new Horizon Europe framework programme. This year of transition requires additional efforts to guarantee the continuity of our operations. Horizon Europe also brings a faster reduction of the EIT financial support than originally anticipated, especially for the so-called first wave KICs (Climate, Digital, Energy). This necessitates stepping up the execution of our sustainability strategy, which is based on several components including co-investment from partners, income generation through services, and the construction of assets mainly through an equity portfolio. Notwithstanding steadily increasing results, additional efforts are needed to address the strong reduction in EIT financial support as well as the negative impact of the COVID-19 pandemic.

EIT Digital contributes to a strong digital Europe through numerous thought leadership initiatives. We will continue our Makers and Shapers journey of conversations with captains of industry, high-profile start-up executives, investors, and policymakers, sharing their vision on digital innovation and the way forward for Europe's digital transformation. And we aim to continue our series of reports, on the Digital Transformation of the European Industry, on European Digital Infrastructure and Data Sovereignty, and on A European Approach to AI. In 2021 and 2022, three further reports will be published, on Digital Finance, on Disruption in Education, and on Digital Technologies for a Green Economy.

ECOSYSTEM

The increasing recognition of our organization is confirmed by the record growth of our partner network: end of 2020 we had more than 300 partners versus 257 partners last year and 30 partners 10 years ago. In 2021 we expect further expansion, increasing the number of partners by 15%. The opening of our new satellite in Antwerp in 2020, the scheduled opening of a satellite in Tallin and planned openings in Greece and Slovenia are a strong statement for our increased focus on the RIS countries.

EIT Digital also supports the establishment of European Digital Innovation Hubs, a collaboration between EU governments and the European Commission's DG CONNECT to create a network of one-stop shops helping companies with their digital transformation, innovation, and business. Our pan-European network of locations across Europe is well positioned to support these Hubs individually, but also to connect them at the European level. We expect to support at least a dozen of these DIHs to be established in 2021.

At a global level we will continue our activities in Silicon Valley where we now team up with other KICs via the EIT Hub San Francisco. Another EIT Hub, established in Tel Aviv, gives us access to the Israeli ecosystem. Finally, even though the UK left the EU, the UK government agreed to participate in Horizon Europe including the EIT, which allows the continuation of our activities from our London and Edinburgh locations.

INNOVATION AND ENTREPRENEURSHIP

In 2021, EIT Digital will further develop its venture creation activities and strengthen its stand-up, start-up, scale-up innovation funnel. The core of this funnel is the Innovation Factory that creates ventures from open Innovation Activities carried out by the EIT Digital partnership. This is complemented by the RIS Venture Program, and Innovation and Entrepreneurship activities in the education programmes.

By 2020, this strategy led to an innovation portfolio of over 200 ventures, with EIT Digital having equity in over 100. In 2021, EIT Digital will further grow the size and value of this portfolio by creating additional ventures from a strong collection of innovation activities and from its RIS Venture Program.

Our EIT Digital 2021 Call resulted in a compelling and impactful innovation portfolio of 48 Activities (including 4 AAA Activities). 29 of them will create a start-up (and a product) and 19 will launch a product. The activities engage 128 partners, of which 105 from industry. Among these, 68 are new partners, who will be working in 36 innovation activities in 2021, up from 48 new partners involved last year.

The following are selected examples of entrepreneurial Innovation Activities we are conducting for each focus area in 2021:

Digital Tech: *PrOTectME* considers that converging IT-OT systems usually expose organizations to security and safety risks, since their security approaches are different. The activity will automate the combined vulnerability assessment of those two infrastructures.

Digital Industry: *B2T2*: Blockchain-based Tracing and Tracking considers producers of goods and logistic operators, who use independent Tracing and Tracking (T&T) systems to ensure quality. B2T2 will connect T&T islands through blockchain federation and integration, offering a complete and transparent view of the origin, status and all steps of a product.

Digital Cities: *Autonomous Street Sweepers* will leverage AI technologies to produce a software platform that allows Street Sweeper vehicles to perform cleaning tasks at any time of the day without a driver, reducing traffic congestion and improving cities' cleanliness.

Digital Wellbeing: *Nylos* will create an application to provide truly personalized diets to people based on intelligent matching of microbiome and nutrition components. It will be combined with food platforms to generate a complete tailored offer to make people healthier.

Digital Finance: *Finance4Hope* will create a platform to align public financial aid for economic policies with companies' detailed profiles and capabilities. It will use machine learning algorithms to assure that funds achieve their objectives, engaging banks to streamline the process.

Moreover, the EIT Digital ecosystem contributes to mitigating the effects of

the COVID-19 pandemic. Early in 2020, we mobilised current and new partners to join pan-European teams and test the application of physical tokens for contact tracing. In early 2021, just a few months later, five teams have developed market-ready solutions and started new ventures to launch their products. A clear sign for the agility of our network and its responsiveness to societal needs.

Aligned with our sustainability strategy, we will capitalize on our action plan launched in 2020 for engaging with investors to support our early-stage ventures, but also our Accelerator portfolio scale-ups.

To further streamline the EIT Digital Accelerator and increase its sustainability, several improvements were made concerning the leadership, the team set-up, the sales and marketing strategy, and core growth support activities that focus especially on access to finance and access to market. In addition, a strategic collaboration with the EIC has been put in place, creating a two-way stream of venture support between EIC and the EIT Digital Accelerator.

ENTREPRENEURIAL EDUCATION

A strong digital economy depends on people and organisations equipped with deep technical competence, strong entrepreneurial skills and agility to act. To this end, EIT Digital develops and engages talents in its selection of schools, offering master and professional level education on the latest digital technologies and on the business opportunities they enable.

In 2021, we will continue our strong delivery of digital talent in particular through our Master School. Despite mobility restrictions caused by the COVID-19 pandemic, we expect to see around 350 Master School graduates and an intake of at least 300 freshmen.

The COVID-19 pandemic has demonstrated that online education is not only a necessity, but also becoming increasingly popular and effective. Our vision is that higher education programs will gradually embed online elements in their on-campus programs. Our partner Universities have demonstrated flexible and agile capabilities to adapt their education to online. Our network of universities is now well prepared to continue this approach and offer blended education as part of their EIT Digital educational offering.

Embedding Innovation and Entrepreneurship activities in our schools ensures they deliver digital talent with an entrepreneurial mindset, proven by the strong track record of EIT Digital alumni that created successful ventures. Increasingly Master School and Doctoral School students participate in our Innovation Activities through internships, post-master positions in ventures, and venture creation.

One focus of our Summer and Professional Schools is up-skilling, centred on key themes aligned with our strategic areas and built and executed in close collaboration with our academic and industry partners. The EIT Digital Professional School has a blended model blueprint, combining face-to-face elements with online modules. Depending on evolving circumstances, we plan for 2021 to deploy at least 11 blended courses with an average of 10 participants for each edition.

Our Summer Schools co-locate tomorrow's digital entrepreneurs and innovators for intensive two weeks trainings to jointly tackle societal challenges related to our five focus areas. In 2021, we foresee to run 11 Summer Schools with more than 450 participants, with two of them in the RIS countries Estonia and Slovenia. Most likely also next year's Summer Schools will have to be conducted exclusively online.

CONCLUSION

In 2020 the world was confronted with an unprecedented COVID-19 pandemic and had to respond fast, and often based on very limited knowledge. The measures put in place to fight the pandemic concentrated on avoiding social contacts as much as possible through travel and meeting limitations, including lockdowns. For a pan-European community like EIT Digital, that strongly builds on connecting people and organisations, these restrictions affected the core of our work. At the start of 2021, one year into the pandemic, we are able to do a first assessment of the impact on our work and delivery. We have been able to successfully move our activities online and even to strengthen the coherence of our community since our online meetings allowed for much larger participation than physical meetings.

Nevertheless, the forced closure of many of our locations had an impact, notably limiting unplanned interactions that often lead to new ideas. However, our activities continued by far and large, they delivered throughout 2020, and preparations of a strong business plan for 2021 went smoothly. Apart from the impact on participation in our education programs, most activities witnessed limited impact. Due to vaccination programs, allowing for stepwise relaxation of restrictions, we see the situation in Europe for 2021 improving. At the same time, we expect to also operate most of 2021 with most activities online.

Next to COVID-19, the transition to Horizon Europe makes 2021 a special year that requires additional efforts. Late agreements on the Multi-annual Financial Framework and the European Recovery Package led to delays in the transition formalities, including the formal signing of our Business Plan. Necessary measures were put in place to guarantee continuity of the operations, which cover most activities.

I want to thank everyone in our organisation, our partner organisations, and our ecosystem that contributed to the preparation and mitigation measures for our 2021 operations. Also 2021 will be an exceptional year. At the same time, we see the challenges of the transition to Horizon Europe being addressed with our concerted efforts, and we also see the beginning of the exit from the COVID-19 pandemic. It will require still effort and resilience from all of us to fully recover from the pandemic, yet by teaming up as a community we will be able to 'Accelerate Recovery'.

Willem Jonker
CEO EIT DIGITAL

MANAGEMENT
COMMITTEE

Willem Jonker
CEO

Chahab Nastar
Chief Innovation Officer

Roberto Prieto
Chief Education Officer

Guillaume Toublanc
Node Director Paris

Laszlo Gulyas
Node Director Budapest

Patrick Essers
Node Director Eindhoven

Lea Myyryläinen
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Node Director Madrid

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Node Director Stockholm

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Node Director Trento

Morgan Gillis
Node Director London

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EIT DIGITAL
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Aalto University EE
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ABB Oy
ABC Accelerator
Abstract SRL
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Achmea Risk Insurance
Advanced Technology Systems
AGS
Ai Square Connect
Alkit
Alter Way
AM-flow
Amey UK
Amiko
Apptension
Apsys
Ariadne Maps GmbH
Artefacto
ATOS
ATTRIBUTIX Korlátolt Felelősségű
Társaság
AV Living Lab

B

Babcock Marine Rosyth
Barcelona Beta Brain Research Center
Bestmile SA
BGI
Bicore
Birmingham City University
Bitwear SRL
BME
Bookit
BookIT Finland
Bright Cape
Bright Cape Holding

C

Campden
Canon Production Printing
Cap Digital
Car Sharing Mobility Services
CEA
CEFRIEL
Chino
Ci3
CITIES FORUM
CITY
CityBeamer
CNR

Comau
Comet Gesinco SL
Connected Kerb Ltd
Consultora de Telecomunicaciones
Optiva Media SL
CPCardio
Creando Redes

D

Data-Moove
Datacon
Datacon BSS Solutions
Degetel
Demetrix
DialogueTrainer
Digital Catapult
Digital Knowledge Observatory
Fundation
DTx Colab
Dublin City University
Dynasec NL

E

E-Group
EcoWise Ekodenge Limited
Efektas Group
Elettrotecnica Rold SRL
ELLURE AB
ELTE
ELTE-Soft
Energenius Srl
ENGIE
Engineering
Engineering D Hub Spa
Ericsson Hungary
Espoo Marketing
Eurapco
Eurecom
evopro Innovation
Experientia
Expert System
Exprivia
EY Netherlands

F

F-Secure
FAM
Farmad NV
FBK
FCA Italy
Ferrovial
Ferrovial Aeropuertos España SA
Ferrovial Agroman

Ferrovial Mobility
FIAT (CRF)
Fifth Ingenium
Fondazione Fenice Onlus
Fondazione Politecnico di Milano
Forum Virium
Fraunhofer-Gesellschaft zur Förderung
der angewandten Forschung e.V.
Fundación 29 de Febrero
Fundación Valenciaport
Future Cities Catapult
Futurice

G

GENESIS Biomed
Genoa University
GEOMOTION GAMES S.L.
GFT IT Consulting
GFT Italia
GFT Technologies
GIM
Gleechi
Greater London Authority
Greenhabit
Grendel Games
Guardtime OÜ

H

HEXAGON VENTURE SRL
HIT
HOP Ubiquitous
Hypermynds SRL

I

iD4Car
IDRO BV
Ikune Oy
Images et Réseaux
IMDEA
IMEC BE
IMEC NL
Indra
Indra Business Consulting
Indra Producción Software
Indra Soluciones Tecnológías de la
Información
INESC TEC
INFOPORT VALENCIA SA
Ingenico Group
Innopay
InnoTractor
INNOV-ACTS LIMITED
Innovalia Associati

INRIA
Integrated Systems Design and
Development SL
Intermodalics BV
IOX-Tech
ISA
Itä-Suomen yliopisto (University of
Eastern Finland)
Italtel
ITOM

J

JCP Connect
JIC
JRC

K

Kinetic Analysis
KIT
Kites
Kone
KTH
KTH Executive School

L

Latitudo40
Levvel
Liberbank
LINKS
Lmad
Logical Clocks
Lombard Odier Asset Management
Lurtis Rules

M

Management Innovation
Mativation
Mellon Technologies
MetFilm Production
Minut
MOG Technologies
MOL Group
MOL Limitless Mobility Ltd
Moviemall AB

N

Nagoon AB
Nobleo Autonomous Solutions B.V.
Nobleo Control
Nobleo Embedded
Nobleo Intelligent Solutions B.V.
Nobleo Projects
Nobleo Technology
Nokia Bell Labs France
Nokia Germany
Nokia Hungary
Nokia Networks Finland
Nordic Electronic Partner Västerås
Nova Veolia
NWO-I - Institute CWI

O

OASC
OKKAM
Olivetti
Onera BV
OTP Bank Nyrt
OTP eBIZ

P

Paris Europlace - FI
PeasyPay Zártkörűen Működő
Részvénytársaság
Peltarion
Pharmi
Philips
Philips Consumer Lifestyle
Pipple
Politecnico di Milano
Politecnico di Torino
Poste Italiane

Q

Quantia Consulting SRL
Quantitative Risk Research

R

Reply
Reply Consulting SRL
ResilTech
RIoT Secure
RISE
RnBGate
Robotnik Automation
Rulex Innovation Labs

S

SAI BV
Santer Reply
SARA BV
Semantum
SIA
Signify
SIS SRL
Slovak University of Technology in
Bratislava
Soben
SoftBank Telecom Europe
Sorbonne Université
Start it @ KBC
Startup Wise Guys
Stichting Health Base
STMicroelectronics
Swansea University
Systématic

T

TalTech
Tampere University
Tampereen ammattikorkeakoulu Oy
(TAMK)

TeamDev
Technip
Teicos
Telecom Italia
Telefonica
The ID Co
Theorem
ThinkInside
Tieto Estonia AS
Tieto Finland
Tractebel Engineering S.A.
Translated
TU Berlin
TU Eindhoven
TU Munchen
TUBS

U

U Bologna
U College London
U Coventry
U Helsinki
U Ljubljana
U Nice Sophia Antipolis
U Rennes 1
U Surrey
U Trento
U Turku
U Twente
U Utrecht
Uhuru United Ltd
UNIT9
Université Côte d'Azur (UCA)
Université Paris-Saclay
University of Amsterdam
University of Barcelona
University of Edinburgh
University of Glasgow
University of Minho
UPM

V

Viewport Studio
Vireum Oy
VISIOPROCESS SAS
VRM Technology DAC
VTT

W

Waire Health LTD
Wingnut Labs Limited

X

XANTA-Tech
Xpand Group

Y

YIT

ABOUT
EIT DIGITAL

EIT Digital is a Knowledge and Innovation Community (KIC) of the European Institute of Innovation and Technology (EIT), an EU body and integral part of Horizon Europe.

EIT Digital believes in making and shaping a competitive digital Europe that is inclusive, fair and sustainable, and it aims at global impact through European innovation fuelled by entrepreneurial talent and digital technology.

EIT Digital embodies the future of innovation by mobilising a pan-European multi-stakeholder, open-innovation ecosystem of top European corporations, SMEs, start-ups, universities, and research institutes, where students, researchers, engineers, business developers and investors address the technology, talent, skills, business, and capital needs of digital entrepreneurship.

EIT Digital builds the next generation of digital ventures, digital products and services, and breeds digital entrepreneurial talent, helping business and entrepreneurs to be at the frontier of digital innovation by providing them with technology, talent, and growth support.

www.eitdigital.eu

EIT Digital

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