



**FOR A STRONG DIGITAL EUROPE**

*Strategic Innovation Agenda 2020-2022*



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*Driving global impact with talent and deep tech.*



# EXECUTIVE SUMMARY

EIT Digital aims at global impact through European innovation fuelled by entrepreneurial talent and digital technology. EIT Digital firmly believes that the future of innovation is ecosystems. EIT Digital supports the members of its pan-European ecosystem to be effective in today's complex open innovation ecosystems in order to address some of their specific innovation needs related to digital innovation and education. Examples include finding the right partners to bring technology to the market, supporting the scale-up of digital technology ventures, attracting

talent and developing their digital knowledge and skills. In order to do so, EIT Digital operates a pan-European network of 16 innovation centres where students, researchers, engineers, business developers and entrepreneurs physically come together to co-create the digital future.

Since its launch, EIT Digital has equipped more than 1,500 students with the skills to innovate and become entrepreneurs; EIT Digital has supported more than 300 startups and scaleups to grow internationally, created more than 120 new ventures and launched more than 380 products and services commercially. EIT Digital continues to build on these strong achievements and in the coming years will focus on further increasing the global impact of European actors in the digital world. EIT Digital will do so by selecting and growing the most promising European digital technology from its ecosystem and beyond, and by supporting the attraction and education of necessary digital talent. This will be based on a gradual further growth of the ecosystem and the innovation and education activities.





# EIT DIGITAL IN A NUTSHELL

**EIT Digital aims at global impact through European innovation fuelled by entrepreneurial talent and digital technology. EIT Digital strengthens Europe's position in the digital world by delivering breakthrough digital innovations to the market and breeding entrepreneurial talent for economic growth and improved quality of life. EIT Digital helps business and entrepreneurs to be at the frontier of digital innovation by providing them with technology, talent, and growth support.**

EIT Digital is a leading European digital innovation and entrepreneurial education organisation driving Europe's digital transformation. Its way of working embodies the future of innovation through a pan-European ecosystem of over 180 top European corporations, SMEs, startups, universities and research institutes, where students, researchers, engineers, business developers and entrepreneurs collaborate in an open innovation setting. This pan-European ecosystem is located in Amsterdam, Berlin, Braga, Budapest, Brussels, Eindhoven, Helsinki, London, Madrid, Milano, Munich, Nice, Paris, Rennes, Stockholm, Trento, and San Francisco.

EIT Digital invests in strategic areas to accelerate the market uptake and scaling of research-based digital technologies (deep tech) focusing on Europe's strategic, societal challenges: Digital Tech, Digital Cities, Digital Industry, Digital Wellbeing, and Digital Finance. EIT Digital breeds 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.



# EUROPE IN THE DIGITAL WORLD

Digital technologies are deeply transforming our economy and society. One way to observe this is by looking at the world's most valuable public companies: digital companies are vastly dominating the list. The situation is similar when we look at the world's most valuable private companies (see Figure 1).

There is another observation that appears in these rankings: Digital is dominated by the US and China. European companies are absent. There are a variety of reasons for this. First and foremost, Europe failed to invent the first waves of digital: the dominating operating systems, search, mobile and social platforms are not European. Winner-takes-all network effects and massive investments by American and Chinese corporations put them in the leadership role. Nonetheless, over the past few years, the situation with respect to

## MOST VALUABLE PUBLIC COMPANIES

Position	Country	Company	Valuation (\$US Billion)
1	US	Apple	1,091
2	US	Amazon	978
3	US	Microsoft	877
4	US	Alphabet Inc.	840
5	US	Berkshire Hathaway	524
6	US	Facebook	474
7	China	Alibaba Group	424
8	China	Tencent	388
9	US	JPMorgan Chase	379
10	US	Johnson & Johnson	371

## MOST VALUABLE PRIVATE COMPANIES

Position	Country	Company	Valuation (\$US Billion)
1	China	Ant Financial	150
2	China	Bytedance	75
3	US	Uber	72
4	China	DiDi	58
5	China	Alibaba Cloud	39
6	US	Airbnb	38
7	China	Tencent Music	30
8	US	SpaceX	24
9	India	Flipkart	21
10	China	Cainiao	20

Figure 1: World's 10 most valuable public and private companies as of Q3 2018. Source: Wikipedia.

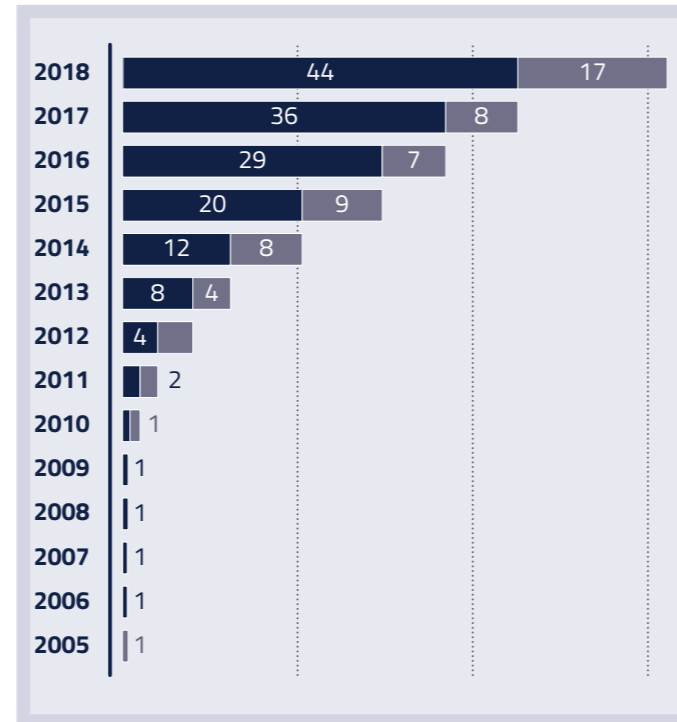


Figure 2: Number of European tech companies valued at over \$1 billion, since 2005. Source: Atomico: The State of European Tech 2018 (www.thestateofeuropetech.com)

entrepreneurship and digital innovation has significantly improved in Europe. In fact, although Europe is still behind the US and China, it is currently (end of 2018) home to 61 private companies valued at over \$1 billion (Figure 2).

Both at the European and national levels, we see increased investment to support entrepreneurs in building and growing their ventures as well as an increased investment in digital technology and deep tech (see Figure 3). Notably areas like Artificial Intelligence (AI), cybersecurity and robotization are high on the agenda as well

as more infrastructure-oriented investments in high performance computing and next generation networks (5G, IoT). Longer-term investments in quantum computing, photonics and optical computing are also on their way.

In Europe these investments in core digital technologies find their way into several application areas where the digital transformation is having high impact such as industry (3D printing, robotics, Industry 4.0, logistics), urban mobility (self-driving cars, multimodal transportation), and finance (digital currencies, blockchain).

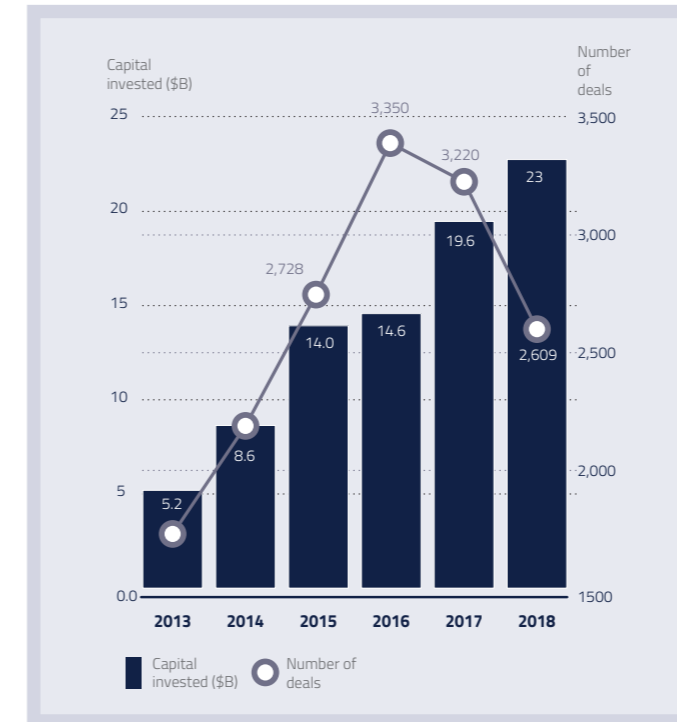


Figure 3: Venture capital investments in European digital companies are significantly increasing. Source: The State of European Tech 2018 (www.thestateofeuropetech.com).

In order to build a strong digital Europe, we at EIT Digital believe that the following challenges need to be addressed:

- **Bring European values to the digital world.** To achieve this, regulation is one way, but a more compelling way is to build global European digital businesses. Europe needs to focus on scaling up disruptive digital ventures that have the ambition to conquer the world.
- **Further address fragmentation to support digital enterprises and entrepreneurs.** Europe needs to accelerate on the Digital Single Market and work towards making the whole of Europe the "de facto" domestic market for European entrepreneurs.
- **Raise R&D investments in digital technologies, with an emphasis on software.** Currently, American and Asian companies are massively investing, while European companies are more conservative.
- **Strongly increase deep tech innovation investments,** so as to take mature research results out of the labs and into the market, especially by means of entrepreneurship.
- **Adapt the European education system to the digital reality,** to equip people with the right digital skills and to deploy digital technology to support education.



together to co-create the digital future. The EIT Digital pan-European ecosystem centred around the EIT Digital Co-Location Centres is the powerhouse to achieve global impact through European innovation fuelled by talent and digital technology.

EIT Digital, as a non-for-profit association under Belgian law, has its main office in Brussels, with its core ecosystem built around Co-Location Centres. Starting from five CLCs in 2010, EIT Digital is meanwhile located in nine EU countries with a total 16 European locations (see Figure 4). In addition, EIT Digital has a Hub in San Francisco to be well connected to the cradle of digital innovation: Silicon Valley.

The Co-Location Centres are hotspots where talents cross-pollinate to create value. Students take classroom courses or study, innovation activities are conducted in agile settings, startups and scaleups are hosted; the EIT Digital staff works out of the CLCs as well.

The number of EIT Digital partners has risen steadily over the years (see Figure 5). Noteworthy is the steady increase of the proportion of business partners in the EIT Digital ecosystem. While in 2010 21% of EIT Digital's partners were from industry, this has risen to almost 60% in 2019.

*By connecting national innovation ecosystems, EIT Digital builds a pan-European digital ecosystem.*

# ECOSYSTEM

In Europe we see a fragmented landscape when it comes to digital markets. This fragmentation hinders Europe's effectiveness in the digital world. Rather than relying on individual national innovation ecosystems, EIT Digital connects them, thus building a pan-European digital ecosystem.

Because at EIT Digital we are convinced that the future of innovation is in ecosystems. Consequently, a pan-European ecosystem forms the core of EIT Digital: a diverse partnership of first-class digital innovation actors including universities, research institutes, business (from startup to SME to large corporate), and national innovation clusters. Although digital is all about virtual presence, we strongly believe in physical proximity to fuel the creativity needed to drive true innovation. Therefore, EIT Digital heavily invests in its so-called Co-Location Centres (CLC), where students, researchers, engineers, business developers and entrepreneurs physically come



Figure 4: EIT Digital locations in Europe. Co-Location Centre locations are indicated by circles. Additional regions (indicated in lighter colour) are covered through EIT Digital regional innovations programme ARISE.

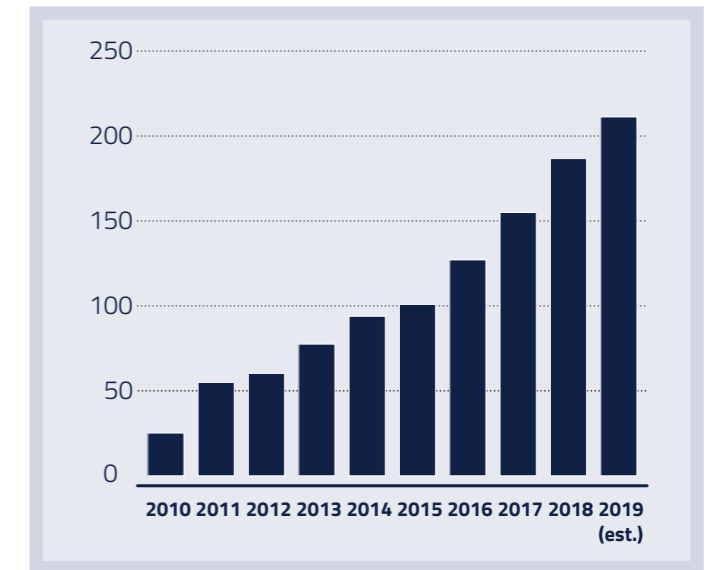


Figure 5: The number of EIT Digital Partners has been steadily increasing through the years.



## CORE ECOSYSTEM

In the coming years, EIT Digital will continue its transformation into a scalable organisation that can support activities across the whole of Europe. EIT Digital will strive for strengthening and consolidating its core European ecosystem. Rather than establishing new Co-Location Centres EIT Digital will develop its ecosystem through welcoming additional partners at a manageable pace, thereby maybe establishing Satellite locations. EIT Digital will also further deepen the connections with regional and national innovation ecosystems and intensify its relationships with local, regional and national governments. In particular EIT Digital will define a financial scheme to obtain national or regional support in the various countries where EIT Digital has a Co-Location Centre.

### EIT REGIONAL INNOVATION SCHEME EXPANSION

In addition to the countries where EIT Digital's Co-Location Centres are located, EIT Digital serves the whole of Europe, with a focus on countries identified as innovation laggards, through the EIT

“Regional Innovation Scheme” (RIS) program. At EIT Digital, this programme is called ARISE.

The programme works as a “virtual node” spanning all the RIS countries in which EIT Digital operates, and deploys the pillars of its strategy: ecosystem, innovation & entrepreneurship, entrepreneurial education.

A recent addition to EIT Digital’s RIS programme is the Venture Programme. This programme supports entrepreneurs in RIS countries with a growth package and a prize for the best incorporated ventures. EIT Digital will further strengthen this programme that has been very successful when piloted in 2018.

EIT Digital is currently working at deploying the EIT Digital Hub concept in Portugal. In the coming years, after strengthening the Braga hub in Portugal, EIT Digital will explore the prospects to establish a hub in other RIS countries.



## GLOBAL PRESENCE

The EIT Digital Silicon Valley hub has put Europe on the map in Silicon Valley, benefitting the entire European continent in the cradle of digital. The impact of the EIT Digital hub convinced the European Institute of Innovation and Technology (EIT) and some of the other EIT organisations to establish an EIT hub in San Francisco under the leadership of EIT Digital. The hub will be modelled after the successful EIT House in Brussels that was already established under the leadership of EIT Digital.

When it comes to further global expansion, EIT Digital will explore the possibility of establishing a hub in Asia. The opportunity to actually create the Asian hub in the coming years and its potential location are both elements that will be analysed carefully.

## A SCALABLE AND SUSTAINABLE ECOSYSTEM

Further expansion of EIT Digital will also require the preparation of the transition into a more scalable organisation that can support activities across the whole of Europe with global outreach. This includes the inclusion of the RIS hubs in the EIT Digital organisational structure in terms of governance and operation. First steps have been taken with the removal of national restrictions on membership, the introduction of the external membership concept, as EIT Digital as the regional allocation of potential new satellites and hubs to the core CLCs.

As part of EIT Digital overall financial sustainability strategy EIT Digital will further deploy its ecosystem sustainability by gradually mobilising local, regional and national financial support for the operation of EIT Digital’s existing Co-Location Centres. The establishment of any new CLC, Satellite CLC, or Hub will only be considered if the financing of its operations through non-EIT means is guaranteed.



# FOCUS AREAS STRATEGIC FOR EUROPE

EIT Digital will strategically concentrate its “deep tech” investments in selected focus areas with significant European relevance and leadership potential:

## DIGITAL TECH

inventing the digital future with core technologies providing secure, robust, responsive and intelligent communications and computation.

## DIGITAL WELLBEING

safeguarding health for the youth, the working professional and the elderly by analysing sensor data.

## DIGITAL CITIES

serving the cities with digital technologies addressing urban mobility, citizen inclusiveness and engagement, and city safety.

## DIGITAL FINANCE

the disruption of digital transactions and institutions with technologies that allow transparency, efficiency, security and trust.

## DIGITAL INDUSTRY

the digital transformation of the industry, from production to logistics to retail.







## EDUCATION AND SKILL NEEDS

Education and skill needs in the area of Digital Tech are covered by several of EIT Digital Master School programmes including trending topics such as Cloud Computing. The EIT Digital blended education provides online courses combining flexibility and areas of interest like Web Connectivity and Security. PhD theses are selected to solve actual industrial challenges like Architectural, planning, integration and methods for 5G. Also, the Summer School includes programmes aligned with Digital Tech, like the summer campus on Big Data and Internet of Things.

### FOCUS

In line with the innovation needs, the Digital Tech area will focus on secure, robust, responsive and intelligent communications and computation.

More specifically, the focus areas are: (i) in networking: the mobile broadband infrastructure (5G), network 'softwarisation' and the Internet of Things; (ii) in computing: cloud computing, big data, and artificial intelligence; (iii) in security: cybersecurity, privacy and trust. Especially important are convergent solutions integrating all of the above components.

EIT Digital mostly focuses on software. Software is by design flexible – it has an innate ability to evolve, adapt and update. It is also at the heart of the digital revolution.

In this area, EIT Digital closely monitors the development of quantum computing, photonics and optical computing to determine when they become mature enough for market adoption.

In the coming years, EIT Digital will put an emphasis on Digital Tech, the area that covers core digital technologies. This horizontal area is EIT Digital's core expertise and it is where "deep tech" is rooted.

## INNOVATION NEEDS

Core digital technologies are the basis of our economy's and society's deep digital transformation. EIT Digital invents our digital future with novel communication, computing and cybersecurity technologies, especially software. These technologies are not only a necessity to serve vertical segments: they are also driving a massive number of students, addressing the shortage of specialists in digital, and offering major innovations and opportunities for GDP growth. 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).



## INNOVATION NEEDS

By 2050, the global urban population will increase by 75% to 6.3 billion (i.e. two thirds of the world population). The challenge of developing and maintaining attractive, inclusive and safe urban environments needs to be met on multiple fronts.

Stakeholders are local governments, city service providers, industry, and the citizens.

Mobility as a service integrates public, private, peer-to-peer, conventional, clean, or autonomous transportation means. It will benefit from the increasing will of citizens to participate in the sharing economy.

Besides their traditional role, cities are increasingly organising and exposing data, especially in real time. City data along with analytics and machine learning improves engagement and inclusiveness of the citizens and of the visitors. Augmented and virtual reality of the city are another facet of exposing or simulating city data from the past, present or future.

A key factor for the attractiveness of a city is the safety of its citizens and visitors: safety of the city and its general resilience to unplannable natural events (e.g. heavy weather) or man-made events (e.g. terrorist attacks).

## EDUCATION AND SKILL NEEDS

Education and skill needs in the area of Digital Cities are included in several of EIT Digital School programmes. Education on key topics as Cybersecurity or usage of Data are very demanded and they are covered by different Master School programmes. Some courses are blended, providing flexible online education on areas like the Internet of things. The EIT Digital PhD industrial theses on Digital Cities provide industrial solutions on topics as Big data analysis in smart cities. Also, the Summer School includes programmes on this line, like the ones developed on Participative Cities.

### FOCUS

In line with the innovation needs, the Digital Cities area will focus on: (i) urban mobility, including autonomous transportation; (ii) citizen information, inclusiveness and engagement; (iii) city safety and resilience with respect to environmental, economic, and demographic developments.

EIT Digital will develop breakthrough solutions with sustainable business models to cope with the challenges that city governments, citizens and businesses are facing in their roles as stakeholders of the urban environment. The high-level objective is for the governments to manage the cities more efficiently, make sure they are resilient, and include citizens in the life of the city.



## EDUCATION AND SKILL NEEDS

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

As examples, Autonomous Systems, Embedded Systems and Human Computer Interaction and Design are topics that are needed for the digital transformation of the Industry. Students have also access to online courses on the area of Digital Industry. Online courses cover many topics on Digital Industry like the Development of Real-Time Systems, that is a key element to allow the digital transformation of industrial processes.

EIT Digital industrial partners propose very actual challenges for the development of PhD theses in EIT Digital Doctoral School. As an example, the Impact evaluation of additive manufacturing on supply chains was one of the topics developed.

The Summer School is the perfect scenario to provide additional education on skills for the digital transformation of the Industry. Topics like Computer vision for Industry 4.0 or Decentralised Production have been included in EIT Digital Summer School.

### FOCUS

In line with the innovation needs, in the Digital Industry area, EIT Digital focuses on the manufacturing full value chain, from production to logistics to retail to consumer engagement. The objective is to manufacture and ship more efficiently, while better addressing customer needs and specificities. Data plays a key role here: throughout the value chain, a massive amount of data is produced, shared. It needs to be analysed to provide insights and drive efficiency.

## INNOVATION NEEDS

With the digital transformation, the manufacturing industry is faced with new technological opportunities and business models. Digital has opened new ways to organise production, logistics and delivery, and offers better means to serve and satisfy consumers. Mass production is increasingly flexible, individualised and resource-friendly to be able to serve the “long tail” of the customer markets. Production is monitored and controlled in real-time to reflect dynamically changing customer demands. At the other end of the chain, real-time consumer trends are collected with increasing levels of granularity. Big data is produced, traded and shared. A major share of the value of the whole business domain is contained in this big data.



## EDUCATION AND SKILL NEEDS

Education and skill needs in the area of Digital Wellbeing are covered by several of EIT Digital Master School programmes that provide general education on Data Science and Human Computer Interaction and Design; these topics are required for Digital Wellbeing. Development of Secure Embedded Systems is very important for the development of digital medical devices, and it is one of the examples of one of the online courses included in EIT Digital’s blended education.

EIT Digital’s industrial partners on the medical sector have proposed very interesting and actual challenges to be solved through PhD theses in EIT Digital Doctoral School. Different PhD theses on Cognitive computing for cognitive disability and electromagnetic study of human cerebral activity have been developed. The Summer Schools provide the optimum atmosphere for Wellbeing education. Topics as Healthy Lifestyle and Independent Living are included in EIT Digital Summer School programmes.

### FOCUS

EIT Digital concentrates its efforts on individuals outside of the hospital: On the one hand elderly people, and on the other hand on the workforce and adolescents.

EIT Digital looks at technologies like predictive analytics, artificial intelligence, accurate sensing, chatbots, gamification to enable digital solutions targeting the young to prevent or detect mental and physical issues in an early phase (e.g. depression, overweight, obesity). Environmental sensing and remote diagnosis are used to develop solutions coping with urban and environmental issues (e.g. air pollution, infectious diseases, stress) affecting the health of the elderly or other vulnerable people (e.g. with chronic diseases).

For health insurers, corporate health programmes, home care- and assisted living providers, nursing homes, and hospitals EIT Digital identifies solutions based on virtual wards, remote unobtrusive monitoring, artificial intelligence (analytics, predictions), robotization (social-mental, help for health professionals), offering on-demand digital solutions offering personalised health & wellbeing services.



## EDUCATION AND SKILL NEEDS

Education and skill needs in the area of Digital Finance are covered by several of EIT Digital Master School programmes including topics as Cybersecurity and Data Science. Some courses are blended, providing online education in topics like Model Checking and System Validation. Different PhD theses on Blockchain, Customer profiling-based personalisation in financial systems and Optimisation of internal processes in financial systems have been developed on Digital Finance. In addition, the Summer School includes programmes on this line, like the ones developed on Blockchains for Economic Security.

## FOCUS

EIT Digital's efforts in driving the digital transformation of the financial industry concentrate on the future of the retail banking, digital wealth management, and modernised corporate banking and insurance. Artificial intelligence and digital trust (e.g. blockchain) technologies are key enablers but require critical assessment to separate hype from productive applications.

In the coming years, EIT Digital will further strengthen its recent "Digital Finance" area which is an area that is still maturing.



## INNOVATION NEEDS

Finance is digital. All established players in the Financial Services Industry acknowledge the need of a deep digital transformation for their organisations as the only means to survive and thrive in the future. Technological capabilities are seen as essential for a future in an industry that is digital in its own essence, as the times of managing physical money and bonds are long gone by. Key is to master the development and delivery of innovative financial products and services through digital technology, with the objective of making user interactions frictionless and financial systems more reliable, more transparent, and less dependent on central infrastructures. Cybersecurity, authentication, (mobile) payments and a cashless society, robo-advisors, etc. all require rights-sized integration and packaging to add true value and consumer benefits.



# INNOVATION AND ENTREPRENEURSHIP

## VISION

Digital platforms touch our everyday lives: operating systems, search, mobile and social are deeply transforming our economy and our society. Network effects apply, putting these platforms at the heart of the global society, and making the world hyper-

dependent on them. In order to fuel growth in our continent and protect our way of life, Europe needs to take centre stage in the future of digital. We need to invent the next wave of digital platforms, applications and innovations.

It is today widely accepted that the next wave of digital innovations will be “deep tech”. These are disruptive solutions built around unique, protected or hard-to-reproduce technological or scientific advances. Deep tech companies have a strong research base. They create value by developing new solutions, not only by disrupting business models.

Deep tech will positively impact all aspects of our economy – industry, transportation, logistics, health, communications, finance, education. Alongside these opportunities, deep tech poses societal challenges, such as job security, data privacy, net neutrality and more recently, the debate around the ethics of artificial intelligence. In order to lead in deep tech, how can Europe’s strengths be leveraged when it comes to innovation & entrepreneurship?

The first answer is to create value out of top European research results. Traditionally, this is done by tech transfer from Research and Technology Organisations (RTOs) and universities to industry. Increasingly, especially in digital, this is best achieved through venture creation. At RTOs and universities, the tech transfer office role is evolving into an incubator role for startups built by young graduates. Despite these evolutions, European research does not produce enough startups, where the future of Europe is at stake.

The second answer is to build the next generation of large dominant industry players in Europe. Starting up a company can be done quite easily today thanks to “love money”, national incentives, and local incubators. But what is strategically important in digital is to be

able to scale up to build large industry players who dominate their market.

The above gaps that EIT Digital has identified drive the EIT Digital strategy in innovation and entrepreneurship. In a nutshell, the strategy focuses on pre-incubation on the one hand, and on scaleup acceleration on the other hand.

## PRE-INCUBATION From deep tech to venture or mvp (minimum viable product)

The first focus of EIT Digital’s innovation & entrepreneurship strategy is to drive the market uptake of top European research results (“deep tech”). The objective is both to “create digital disruption” (through venture creation) and to “support digital transformation” (through the launch of a Minimum Viable Product – or MVP).

Pre-incubation is embodied in an innovation activity that is entrepreneurial and agile. The activity can create a startup that is the vehicle driving digital disruption into the market. It can also create an MVP brought to market by an established industry player, thus driving the digital transformation of their industry.



Figure 6: The integrated Innovation and Entrepreneurship funnel.

*Between 2020 and 2022 EIT Digital will create 120 startups, and launch 255 products commercially.*

Innovation activities gather a few EIT Digital Partners to bring a promising, mature research result out of the lab and quickly into the market. The engagement of EIT Digital’s industry partners, as well as, research and technology organizations (RTOs) are seen as key elements for pre-incubation.

Innovation Activities may be grassroots, that is, awarded through a broad open and transparent call process. EIT Digital has run such a call annually for a number of years.

They may also be designed, focusing on a well-identified strategic topic with a 3-year mindset of venture creation, venture support and stage-gated evaluation. This type of activity will be experimented with in the coming years.

In addition, EIT Digital will provide stronger support to young entrepreneurs in its pre-incubation programme. This includes broader participation of EIT Digital Schools’ students and graduates to innovation activities.

Last but not least, the pre-incubation programme needs to be sustainable. Further to the EIT financial support, other income will need to be systematically generated through innovation activities and re-invested.

## KEY ACHIEVEMENTS

Figure 7 summarises the outputs of EIT Digital innovation activities over the past years. EIT Digital focus is increasingly on venture creation out of those activities. Some of our success stories can be found in Appendix I.

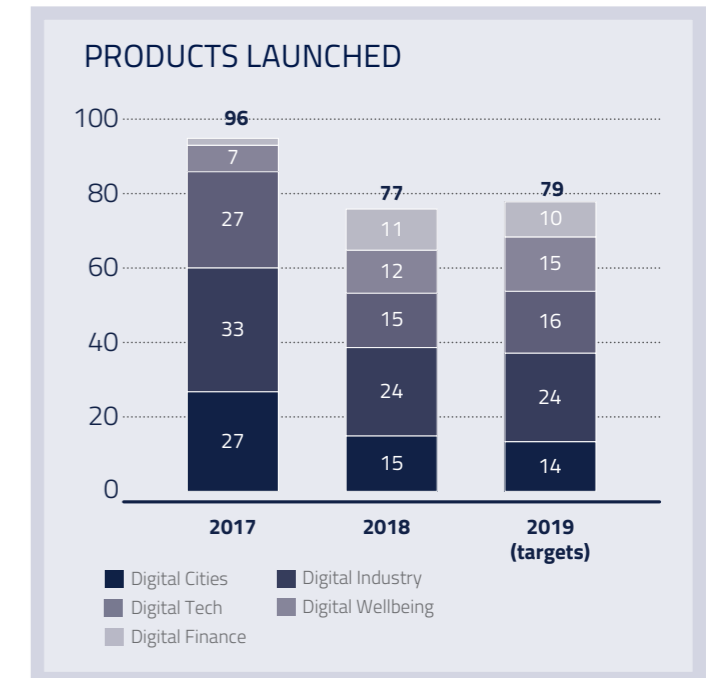
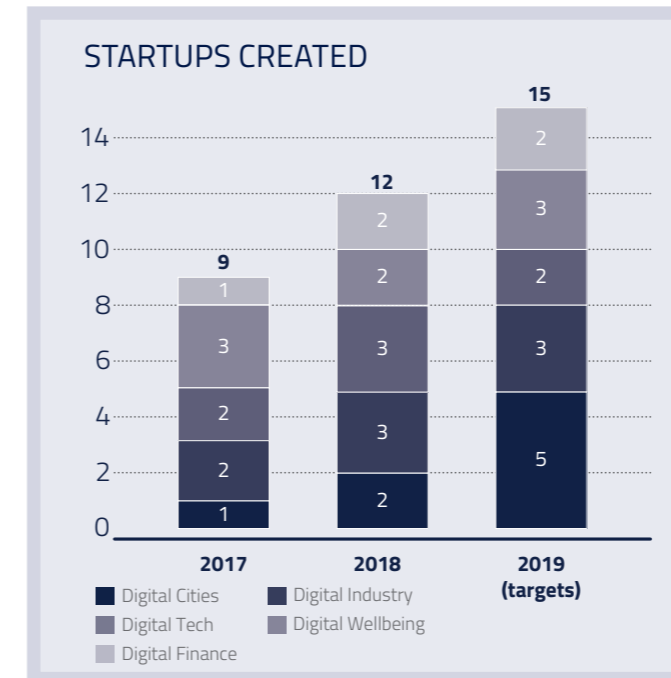


Figure 7: The number of startups created by EIT Digital from Innovation Activities is rapidly increasing and will further increase in the 2020-2022 period. The number of products launched annually is stable.

# SCALEUP ACCELERATION

## from venture to dominant industry player

The second focus of EIT Digital’s innovation & entrepreneurship strategy is to build a new generation of dominant European industry players. To this end, EIT Digital provides growth support to fast-growing European deep tech startups (also known as scaleups). This addresses a European weakness: Europe creates a fair number of startups, but most of them stay small. Europe needs to put more emphasis on scaleup support across the continent and beyond, in order to build the likes of Google, Amazon, Facebook and Apple. In addition, deep tech scaleups are the ones that the European future depends upon.

The above observations define the EIT Digital Accelerator’s mission. The EIT Digital Accelerator integrates the Access to Market, the Access to Finance and the EIT Digital Challenge activities:

- Access to Market service is driving scaleup introductions to corporate decision makers across all European markets with the purpose of enabling fast, smooth and international deal making.
- Access to Finance service is supporting the scaleups to raise international fundraising rounds typically in the €5-15m range (A-B rounds).
- The EIT Digital Challenge is EIT Digital Accelerator’s pan-European contest to attract the most promising deep tech scaleups in Europe, that are ready to scale up their businesses internationally by benefitting from the Accelerator’s support (see Figure 8).

The services of the EIT Digital Accelerator are provided through a distributed team of business developers and access to finance specialists providing hands-on support to deep tech scaleups. The Accelerator has direct access to a pan European network of over 500 corporate customers and over 300 private investors (venture capital and corporate venture).

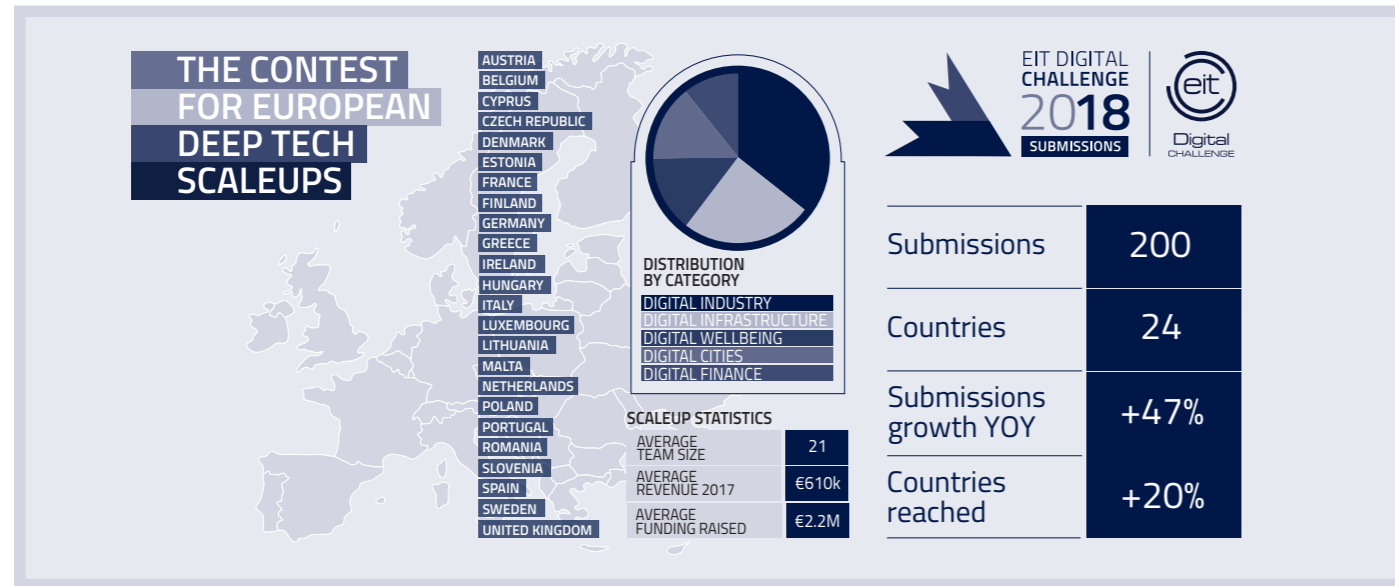


Figure 8: The 2018 edition of the EIT Digital Challenge, the EIT Digital deep tech scaleup contest, was extremely successful.

*Between 2020 and 2022 EIT Digital will help 130+ European companies to scale up internationally.*

## KEY ACHIEVEMENTS

Figure 9 shows some key numbers about the Accelerator and how it has evolved. The Accelerator has shown impressive growth through the years since its inception in 2012, when it was mostly supporting digital startups. The focus shifted to scaleups in 2015, then deep tech scaleups from 2016. At the beginning of 2017, in order to build the true European tech champions of the future, the Accelerator selection process became more demanding, and a sustainable business model was introduced.

Today the EIT Digital Accelerator is recognised as a unique pan-European vehicle for deep tech, providing hands-on support for international customer acquisition and fundraising – thereby addressing a key issue for growing enterprises: Europe’s fragmented markets. In the coming years, EIT Digital’s ambition is to establish the EIT Digital Accelerator as the top European accelerator for deep tech digital scaleups.

Some of our success stories can be found in Appendix II.



Figure 9: The EIT Digital Accelerator is building the next generation of dominant industry players.





# ENTREPRENEURIAL EDUCATION

## Vision

**No innovation without education! Innovation requires talented people that are able to successfully bring technology to the market. The digital transformation of society and economy poses significant challenges for education, as reiterated in a recent report by the World Economic Forum (see Figure 10).**

EIT Digital strongly believes in T-shaped talent that is equipped not only with solid technical knowledge to truly develop and access the value of technology, but also with the necessary entrepreneurship and business skills to spot opportunities, understand market needs and capitalise on them. All EIT Digital education programmes have this approach as a core ingredient.

Next to the need to have both technical as well as entrepreneurial skills, innovators have to be able to be effective in today's open innovation ecosystems which require mobility, both organisational as well as geographic. This is another core ingredient in EIT Digital's

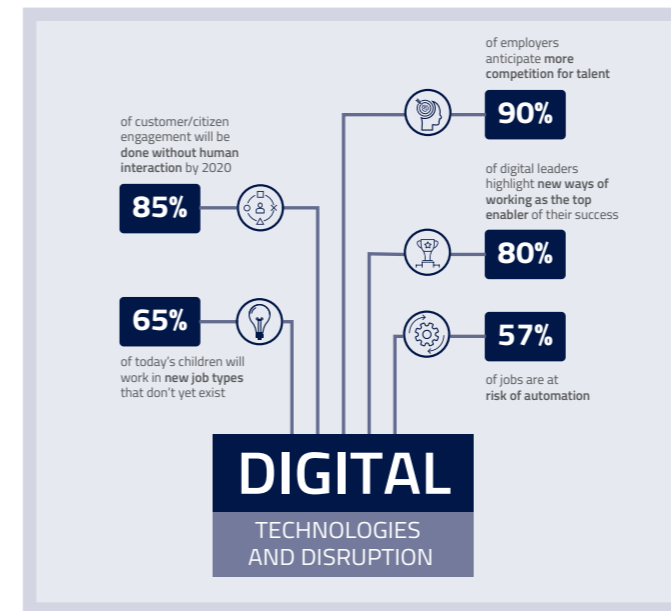


Figure 10: Educational challenges from the digital transformation (source: World Economic Forum Insight Report, 2018: The Digital Enterprise - Moving from experimentation to transformation).

education programmes. Digital technology disrupts many domains, including that of education itself. Online education and especially MOOCs are becoming increasingly popular. Although universities recognize the developments, the key question remains how online education will impact on-campus education. EIT Digital's vision is that higher education programmes will gradually embed online elements in their on-campus programs and will offer blended education programmes. Therefore, as third core ingredient in EIT Digital's education programs, together with its partner universities, EIT Digital works on the exploration and development of blended education programmes in order to offer the EIT Digital students the best of both worlds.

Finally, innovation requires talent equipped with up-to-date knowledge on technology and understanding of the domains where the technology is deployed. Especially with digital EIT Digital sees both a fast development of the technology itself, as well as that

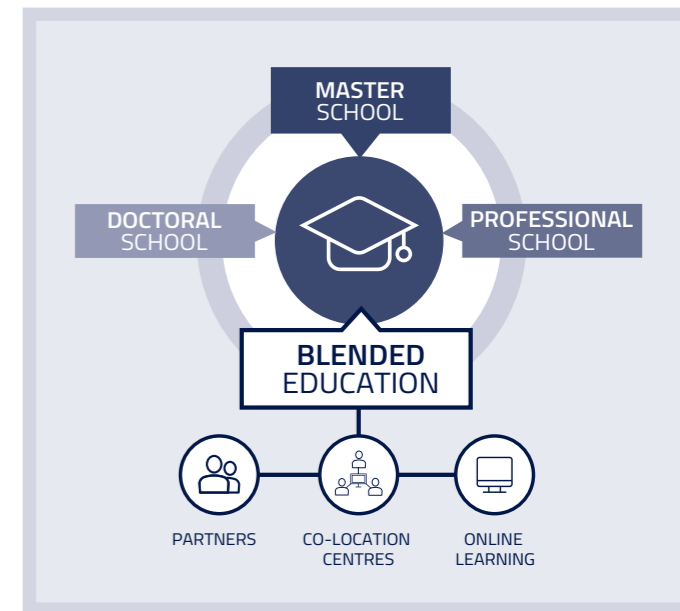


Figure 11: EIT Digital Blended Education model.

of its application domains. So, in order to be relevant, EIT Digital's education programmes need to be state-of-the-art and at the frontier of technological and societal developments. This not only means that EIT Digital has to permanently renew its programmes, but also that EIT Digital has to make sure that its students are, during their education, immersed in the core application domains, amongst others through intense contacts with industry. It is here where EIT Digital education programmes strongly benefit from the EIT Digital ecosystem and the Co-Location Centres where the students have ample opportunity to work with the diverse actors in the EIT Digital pan-European ecosystem.

Some of our success stories can be found in Appendix III. A sample of our education programmes is in Appendix IV.



two years. Upon fulfilment of all degree requirements, students receive two degrees: one from the Entry University and a second from the Exit University. Students also receive an EIT Label Certificate endorsed by EIT and issued by EIT Digital.

Figure 12 shows the steadily increasing student intake of the Master School over the past years.

For the period 2020-2022 EIT Digital's strategy for the Master School will further scale the student intake (reaching 800 by 2022) and bring individual entry and exit points to critical mass. To that end, EIT Digital will grow the student recruitment capacity, with a special focus on the students from EU countries. EIT Digital will operate a blended execution model across the complete Master School for selected programmes (including Embedded System, Data Science, and Cybersecurity) with a first semester as online education. EIT Digital also will provide stronger support for young entrepreneurs, e.g. by providing space in the EIT Digital Co-Location Centres.

## MASTER EDUCATION

### *The digital entrepreneurs and innovators of tomorrow*

The EIT Digital Master School aims at delivering T-shaped innovators with an entrepreneurial mindset delivering talent to the digital labour market that either will be co-creators of ventures or will enter an industry. The emphasis is on delivering an attractive, cutting-edge programme portfolio that addresses Europe's digital skills shortage. This includes EIT Digital's signature Innovation & Entrepreneurship education, as well as innovation learning models like the new Blended Master.

The EIT Digital Master Programmes are dual degree programmes (2-years and 120 ECTS) with a demand to study in two different countries. The curricula foresee one year of studies at the Entry University (60 ECTS) and one year of studies at the Exit University (60 ECTS). Programmes also include a mandatory standardised Innovation & Entrepreneurship (I&E) minor (30 ECTS) taught over

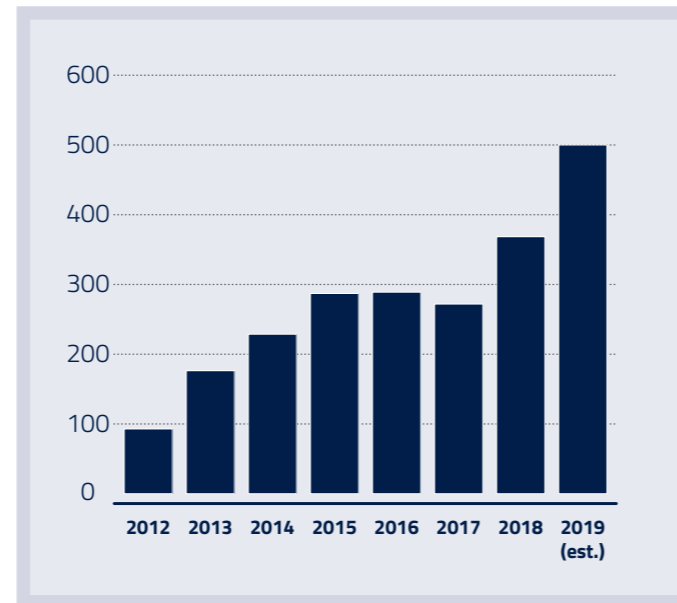


Figure 12: Development of Master School students intake per year

*EIT Digital has equipped 1,500+ students with the skills to innovate and become entrepreneurs.*

The fast pace in digital technologies requires that EIT Digital continuously improve and renew the technical programmes to keep them state-of-the-art and aligned with its focus areas. EIT Digital will employ its specialised blended masters on embedded systems and data science across the complete Master School and intensify the involvement of students in the EIT Digital innovation activities. From an operational point of view, EIT Digital further improves quality and operational excellence and further drive the financial sustainability.

## DOCTORAL EDUCATION

### *Tomorrow's leaders in digital innovation*

The EIT Digital Industrial Doctoral School offers Industrial Doctorates, aimed at breeding T-shaped talent with the potential to become the industrial innovation leaders of tomorrow. The PhD work is focussed on product and market-driven technology research, complemented by the development of innovation and entrepreneurship skills. Within an Industrial Doctorate, students work under academic supervision on research assignments from industry. After graduation, these doctors will be commercially-savvy digital leaders who understand current and future challenges, as well as the opportunities they present to industry.

The PhD candidates work on topics aligned with the innovation activities of EIT Digital's focus areas, based at Doctoral Training

Centres (DTCs) in the Co-Location Centres. Next to core technology research, the Industrial Doctorate programme focusses on hands-on innovation, and entrepreneurship education and mobility. The standardised I&E education enriches the studies of each candidate and consists of two phases: first a business competence phase, then a business development experience. Mobility consists of a minimum of six months geographical and six months organisational.

Figure 13 shows the increasing student intake of the EIT Digital Industrial Doctoral School over the past years.

For the period 2020-2022, EIT Digital's strategy for the Industrial Doctoral School will be to further grow the number of DTCs to at least one per country, with a critical mass of 20 PhD students per DTC. As a consequence, EIT Digital will scale the student intake to reach a stable cohort of 250 PhD candidates by 2022. This will go hand-in-hand with further improving, streamlining and harmonising the innovation and entrepreneurship elements of the programmes, and involving the PhD students in the innovation activities, where possible.

On the operational side, EIT Digital will optimise collaboration with the network of Doctoral Training Centres, further improving quality and operational excellence, and further driving the financial sustainability of its education activities.

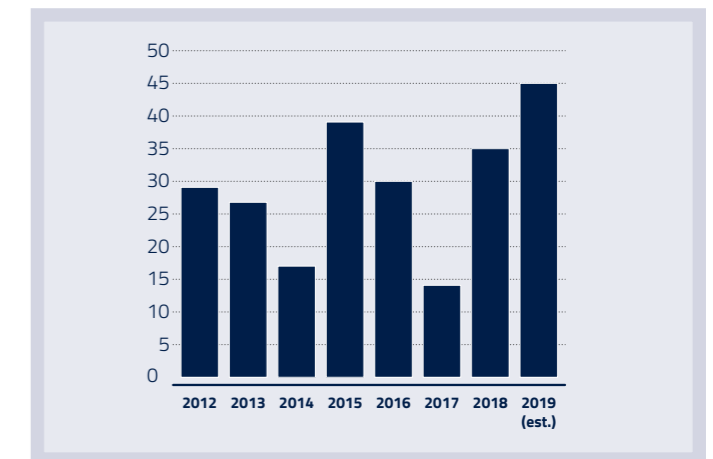


Figure 13: Growth of the Industrial Doctoral School students intake per year.



courses with EIT Digital education and industry partners, and further grow the number of annual courses to an average of two per Co-Location Centre or satellite location, with a critical mass of 30 participants per course.

On the operational side, EIT Digital will further improve the excellence of course design and delivery, significantly grow its marketing, sales and communication capacity, and further drive financial sustainability.

A good example of what EIT Digital can offer in professional and executive education is the “Cybersecurity 360 for Professionals” course. For this highly relevant topic EIT Digital partnered with one of the most prestigious universities in the world, UC Berkeley. It is an international in-person programme, with one module offered at Berkeley and one in Europe (Munich), delivered jointly by world-class US and European experts. Participants can choose to attend

## PROFESSIONAL EDUCATION

### *The digital innovation leaders of today*

The EIT Digital Professional School keeps European professionals at the forefront of today’s fast-paced digital technologies. It addresses a rising need: employers surveyed by the World Economic Forum estimate that, by 2022, 54% of all employees will require significant reskilling and upskilling (see Figure 14). The EIT Digital Professional School meets this demand through an innovative portfolio of blended learning courses for experts working in the digital sector, and sectors highly influenced by emerging digital technologies. The blended learning format meets the need for efficient learning and training for busy, time-poor professionals. The offering is well aligned to EIT Digital’s focus areas.

For the period 2020-2022, EIT Digital’s strategy for the Professional School will be to significantly increase the course portfolio and sales efforts. EIT Digital will develop a strong portfolio of professional



Figure 14: Expected average reskilling needs across companies, by share of employees, 2018–2022. Source: World Economic Forum Future of Jobs Survey 2018.

one or both modules. The programme targets decision-makers and managers in all industries and public organisations, as cybersecurity now affects virtually every organisation. Attendees learn about different kinds of cyberattacks and the risks they pose to their organisations. They also learn fundamental cybersecurity principles, and their application to key technical systems in order to manage security challenges and data privacy. As an added benefit of having the programme take place in Munich and the San Francisco Bay Area, participants are able to make site visits to companies, which include specific “Show and Tell” demonstrations of cybersecurity best practices from each region’s industry leaders.



## ONLINE AND BLENDED EDUCATION

EIT Digital delivers online and blended education as part of its programmes in the Master, Doctoral, and Professional Schools, as well as public MOOCs via the Coursera platform. The online modules are mostly I&E modules, supporting the various programmes.

For the period 2020-2022, EIT Digital’s strategy for online and blended education will be to maintain the engagement level of its MOOCs, while integrating online modules and MOOCs in the relevant schools. EIT Digital will fully align the public MOOC portfolio with its Master School programmes, its online innovation and entrepreneurship modules of various EIT Digital Schools and its focus areas.

On the operational side, EIT Digital will improve excellence of course production, streamline the use of platforms for the various MOOCs and work towards a sustainable production and delivery model.

EIT Digital provides its online and blended I&E education to improve quality, increase diversity and availability of top-level content from 20 excellent universities of technology across Europe. The universities together deliver a unique blend of the best technical knowledge and entrepreneurial skills and mindset to digital engineers and entrepreneurs at all stages of their careers. EIT Digital’s online course materials are available on Coursera, one of the largest online education platforms.

*EIT Digital’s online and blended I&E education enriches the top-level content from 20 excellent universities of technology across Europe.*



## EIT DIGITAL COURSES ON COURSERA (AS OF 2018)

### Related to Embedded Systems Master Programme:

- Architecting Smart IoT Devices
- Capstone: Autonomous Runway Detection for IoT
- Development of Secure Embedded Systems
- Development of Real-Time Systems
- Embedded Hardware and Operating Systems
- Introduction to Architecting Smart IoT Devices
- Quantitative Formal Modelling and Worst-Case Performance Analysis
- Software Architecture for the Internet of Things
- System Validation (1): Automata and behavioural equivalences
- System Validation (2): Model process behaviour
- System Validation (3): Requirements by modal formulas
- System Validation (4): Modelling Software, Protocols, and other behaviour
- Web Connectivity and Security in Embedded Systems

### Related to Data Science Master Programme:

- Automated Reasoning: satisfiability
- Quantitative Model Checking
- Foundations of mining non-structured medical data

### Related to I&E Minor Master Programme:

- Capstone Value Creation through Innovation
- The Impact of Technology
- Innovation & Entrepreneurship - From Design Thinking to Funding
- Innovation & Entrepreneurship - From Basics to Open Innovation
- Marketing Strategy for Entrepreneurs
- Value Creation Through Innovation



## INTEGRATION OF EDUCATION, RESEARCH AND BUSINESS

No innovation without education, but also no education without innovation. The seamless integration of Education, Research and Business is at the heart of the EIT and thus of EIT Digital.

At the core of the EIT Digital knowledge triangle integration strategy is the involvement of the EIT Digital students in the EIT Digital innovation and entrepreneurship activities, as well as the alignment of the education programmes with the EIT Digital focus areas. During the period 2020-2022 EIT Digital will further develop and expand its knowledge triangle integration strategy by increasing the number of master and doctoral students in the EIT Digital innovation activities, by scaling up its post-master programme to increase the number of Master School's graduate working in EIT Digital ecosystem (industry partners, innovation activities and scaleups) and by increasing the engagement of the EIT Digital industry partners in the EIT Digital Academy. In particular, they will further contribute to the Professional School by bringing more participants and by defining and delivering the courses, while in the Summer Schools they will teach and bring real innovation and entrepreneurship cases.

# EIT DIGITAL: WELL CONNECTED AND EMBEDDED IN ITS ENVIRONMENT

## COLLABORATION WITH OTHER EIT KICs

EIT Digital actively promotes cross-KIC collaboration as digital transformation represents a major opportunity for all the EIT Innovation Communities for addressing the respective global challenges. Starting from 2017, EIT Digital has increasingly strengthened the collaboration with other KICs through joint activities. Collaborations have taken place in various areas; examples include Smart Cities with EIT Climate KIC, digital solutions for health and wellbeing with EIT Health and product life cycle management with EIT RawMaterials and EIT Climate KIC.

In addition, a structured collaboration between the Digital Wellbeing focus area and EIT Health has been kicked off in 2018 with the objective of jointly addressing societal challenges in the health domain.

EIT Digital leads the establishment, operations and expansion of the EIT House in Brussels, an important tool for the EIT Community to increase its visibility towards the Brussels-based stakeholders and decision makers in the context of the Horizon Europe negotiations.

In other parts of Europe, the Innovation Communities are exploring opportunities to consolidate their presence in cities and region where more than one Community is operating. This will allow the KICs to talk with a single and stronger voice towards the local and national stakeholders, thus strengthening their positioning and visibility. KICs will also establish a stronger presence beyond Europe (US, Asia & Israel). EIT Digital, as the pioneer KIC in Silicon Valley,

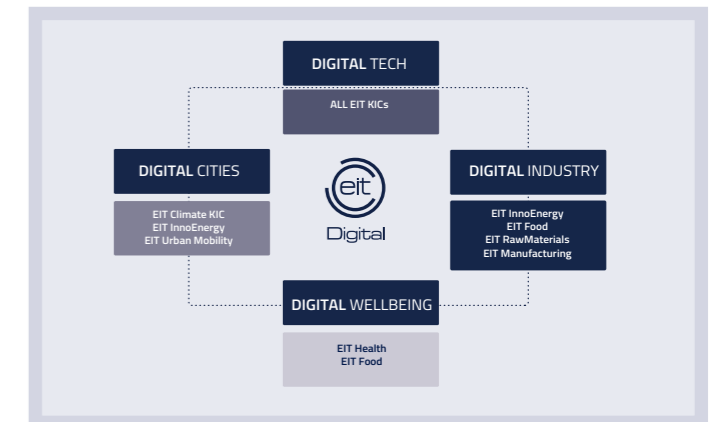


Figure 15: EIT Digital's synergies with other KICs.

has led the establishment of an EIT hub in Silicon Valley and will further work to develop and strengthen the EIT presence in the US.

Lastly, in the education domain, EIT Digital participates in several joint initiatives with the other KICs aiming at strengthening the Online Education offer of the KICs (e.g. through the development of cross-KIC MOOCs). In addition, KICs jointly support the implementation of the Digital Education Action Plan of the European Commission. EIT Digital plays a key role in this area by supporting initiatives around EU-wide awareness-raising on online safety and cybersecurity.

## COLLABORATION WITH OTHER EU INITIATIVES

On a European level, EIT digital is well connected and engages with a number of EU programmes, pursuing two major objectives: supporting the execution of EIT Digital’s strategy by actively scouting actors and cooperation opportunities to complement the efforts of the EIT Digital core functions (Innovation and Entrepreneurship, Entrepreneurial Education); reinforcing the EIT Digital leadership in digital transformation by engaging in strategic discussion with other relevant organisations and instruments.

As part of Horizon Europe, EIT Digital will ensure the establishment of synergies and collaborations with key actors in all the three pillars, with an emphasis on global challenges and industrial competitiveness.

In addition, the next Multiannual Financial Framework increases its focus on the Single Market, and Innovation. EIT Digital’s mission is fully aligned with the objectives of the Digital Europe Programme; in the period 2020–2022 EIT Digital will create collaboration opportunities with it in order to drive the digital transformation of public services and businesses, by boosting investments in high-performance computing and data, artificial intelligence, cybersecurity and advanced digital skills, as well as large-scale deployment of digital technologies across European economic sectors.

Our EU and National collaborations can be found in Appendix V.

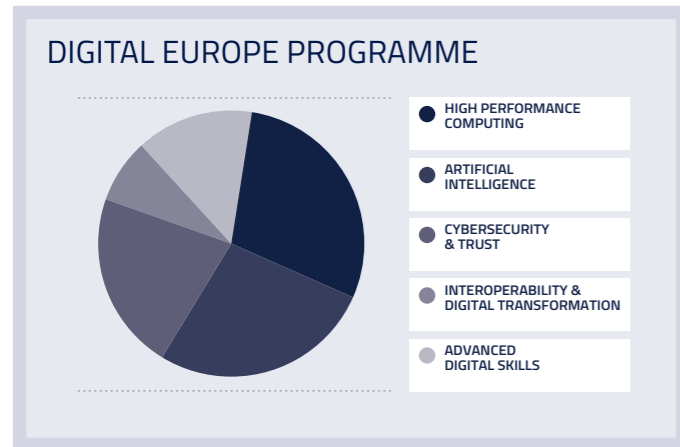


Figure 16: Digital Europe Programme



Figure 17: Horizon Europe Programme

# A FUTURE-PROOF SUSTAINABLE ORGANISATION DELIVERING GLOBAL IMPACT

Since its start in 2010 EIT Digital has gradually scaled up its operations in innovation, entrepreneurship and education resulting in increased delivery of innovations, scaled ventures, and EIT labelled graduates. The delivery has grown the recognition of the organisation demonstrated by the growing membership, the geographic expansion, the growing number of collaborations with other EIT organisations and other actors in the European research, development, innovation, entrepreneurship, and education space, as well as the increased visibility in tier-1 media and more recently in the policy debate. In order to keep up with the growth, the governance reform has transformed EIT Digital during 2017/2018 into a future proof organisation set-up in a way that allows for sustainable operation in an open innovation environment with diversified sources of income.





*EIT Digital will further develop its sustainability strategy to generate income to be re-invested in impactful activities.*

### CORE SUPPORT FOR FINANCE, HUMAN RESOURCES, AND COMMUNICATION

For the period 2020-2022 EIT Digital's core support efforts will specifically address:

- The strengthening of its sustainability strategy
- A strong focus on talent at all levels of its organisation and across all of its activities
- The further building of the EIT Digital reputation and brand

### SUSTAINABILITY DEVELOPMENT 2020-2022

In the period 2020-2022, EIT Digital will further develop into an impactful and sustainable organisation. EIT Digital's ambition is to keep a stable level of investment (€100m per year) in spite of the decreasing EIT financial support. EIT Digital will therefore further develop its sustainability strategy to generate income to be reinvested in impactful activities. The main elements of the EIT Digital's sustainability strategy are reported below.

### INNOVATION & ENTREPRENEURSHIP: PRE-INCUBATION

For venture creating Innovation Activities, EIT Digital takes equity in startups created as a result of these activities. The equity allocated to EIT Digital is proportional to the EIT financial support provided to the Activity and consists of ordinary shares. For MVP creating activities, these contribute to EIT Digital's sustainability by providing a financial return to EIT Digital. The re-investable income from Innovation Activities is expected to grow up to €5m/year in 2022. In addition, EIT Digital will increasingly engage with national and regional funding agencies to attract financial support to sustain the costs of the EIT Digital Innovation Activities. This additional source of income is expected to grow up to €5m/year as of 2022.

### INNOVATION & ENTREPRENEURSHIP: SCALEUP ACCELERATION

The EIT Digital Accelerator will continue to operate with the already established model: a service provider to scaleups for Access-to-Market and Access-to-Finance. Scaleups that benefit from the services of the EIT Digital Accelerator compensate EIT Digital for the provisioning of these services through a base fee and a success fee for each Access to Market and Access to Finance deal facilitated. It is expected to support a portfolio of more than 70 scaleups each year and to attract more than €50m Venture capital (VC) investments every year. The income generated by the EIT Digital Accelerator is expected to grow up to €7m in 2022.



### ENTREPRENEURIAL EDUCATION

Thanks to its increased reputation, the EIT Digital Master School will increase the income from tuition fees by attracting more students paying higher tuition fees. At the same time, EIT Digital will reduce the number of scholarships. The limited number of EIT Digital scholarships will support the very talented students that do not have national scholarships or private means to pay for the studies. These elite scholarships will safeguard EIT Digital to work with a student body capable of becoming top innovators and digital transformers.

As part of its Industrial Doctoral School, EIT Digital co-funds industrial PhD grants. The industry will increase its contribution and EIT Digital will access to special Government (i.e. Business Finland, CIFRE in France, MIUR in Italy) and European funds (i.e. COFUND) to cover the remaining part of the costs.

The EIT Digital Professional School generates income for EIT Digital via a revenue share agreement between EIT Digital and its partners, who develop and operate the courses. The stronger focus on on-demand courses able to meet the need of the industry will support increased revenue generation.

The income from Education Activities is expected to grow up to €5m in 2022.

### ECOSYSTEM

EIT Digital will grow its ecosystem by attracting new, strategically selected partners each year. In addition, a number of organisations will increasingly engage in the EIT Digital activities on a temporary basis as external Partners. Both partner categories pay an annual membership fee. The income from this source is expected to reach €3m in 2022.



In the countries where EIT Digital operates, it will further deepen the connections with regional and national funding agencies in order to obtain financial support for EIT Digital's local operations. When applicable and possible, EIT Digital will act in synergy with partners and/or other EIT KICs in order to maximise the impact. The national and regional financial support attracted will grow up to €4m in 2022.

### CO-INVESTMENT FROM PARTNERS

In addition to income generation, partners' co-investment supports the cost of activities. The level of co-investment will stabilise at €25m per year in 2022. Next to the innovation activities, which already include co-investments by partners up to 50%, the co-investment from partners will increase up to 50% in the Education activities too.



Figure 18: EIT Digital income projections 2020-2022

## APPENDIX I

### INNOVATION & ENTREPRENEURSHIP SUCCESS STORIES: PRE-INCUBATION

#### DIGITAL TECH

## SECURITY OPERATIONS CENTRE FOR CRITICAL INFRASTRUCTURE

Critical infrastructures are frequently exposed to advanced, persistent threats which can cause severe service interruption, equipment damage, huge financial losses and even casualties. Despite existing security systems, critical infrastructures remain vulnerable and need a solution that can detect attacks at an early stage. EIT Digital's Security Operations Centre for Critical Infrastructures Innovation Activity addresses the robustness of industrial networks, especially real-time breach detection and response, and provides cyber threat intelligence.

The Security Operations Centre (SOC) guarantees improved anomaly detection capability, thanks to real-time machine learning-based data analysis, and makes security sensors more resilient against attacks for improved protection. Compared to other security systems, the cloud-based SOC solution helps to identify a cyber threat before it reaches its target and informs the client within 30 minutes of the attack being detected. It is also supported by an incident response team, which provides continuous security monitoring and root-cause analysis.

Provided as a customised service to various critical infrastructures such as communications, energy, gas and water, the SOC system can be integrated into existing operations, and tailored to most European industrial networks. The solution is now being deployed by four customers in Finland, Hungary, Spain and Sweden, and will further expand its market traction.

#### DIGITAL CITIES

## CITY ENABLER POWERED BY CEDUS

The City Enabler solution created by CEDUS Innovation Activity is a FIWARE-based software product allowing urban service providers (public and private) and local governments to actively collaborate in exploiting urban data. Data is managed and visualised using innovative map-based urban services, in order to support city managers in decision making processes, opening up new business models for all the stakeholders, and thereby creating new ventures.

In 2018, the first Italian cities using The City Enabler were Genoa, for natural disaster management, and Palermo to manage urban data. In South America, a contract was signed with a telco in Montevideo, Uruguay in the area of smart parking and air quality management and a new one will be signed soon by a city in Argentina. Around 20 other cities are already in discussions with EIT Digital and a first NDA was signed with a large telco in Europe.

Finally, a consortium that includes EIT Digital submitted a proposal for the SELECT for Cities Pre-Commercial Procurement (PCP) issued by the cities of Antwerp and Helsinki. It is now engaged in the final phase.

#### DIGITAL INDUSTRY

## PRODUCT QUALITY PREDICTION (PQP) TOOL

The manufacturing industry is a late starter in the digitisation journey. Although the automation level per production sector differs significantly from low to highly automated factories, the potential for data and AI remains largely under-utilised in production design, monitoring, maintenance and quality control. EIT Digital promotes the digitalisation of the manufacturing environment through its Innovation Activity Product Quality Prediction (PQP). This initiative aims to accelerate quality inspection of mass production lines and prevent malfunctioning products reaching the market.

PQP's key technical innovation is its machine-learning algorithm, which uses sensor data from the manufacturing machinery and its environment to predict the quality of each individual product based on the previous output. If a quality decrease is detected, the PQP system gives an early warning to prevent possible interruptions in the manufacturing line, thus reducing downtime and eliminating the need for batch-based post-production inspection. More specifically, once installed, this system can result in up to 50% scrap decrease, a 3% downtime reduction, 10% personnel cost savings and a 5% revenue increase as more products get shipped. Thanks to available plug-ins, the PQP data analytics tool is applicable to every type of product, allowing manufacturers from all kind of industries to create better products at lower cost. The company BrightCape is bringing the PQP solution to the market.

#### DIGITAL WELLBEING

## ELEMENT

### *Early detection of cognitive disorders such as dementia on the basis of speech analysis*

Care centres and health professionals are progressively becoming aware of the increasing opportunities offered by digital technologies to explore new therapeutic approaches. To this end, the new startup, ki-elements, spun out of the EIT Digital Innovation Activity "ELEMENT" and is making a significant step forward in addressing the medical needs of people with Alzheimer's disease and other dementias. In particular, ki-elements offers an iPad app called Delta, which facilitates earlier diagnosis of cognitive decline through speech analysis, and effective intervention to maintain a patient's quality of life.

The Delta app is an AI-powered tool designed to support clinicians with comprehensive assessments of dementia patients in a cost-effective way. Delta uses computational linguistics technologies to analyse previously recorded speech data, and compiles cognitive test results, visualisation and interpretation into a digital report. The Delta app not only reduces cognitive status screening time by over 50%, but also simplifies decision processes and improves diagnosis accuracy. ki-elements obtained a CE certification to accelerate the app's commercialisation throughout European-speaking markets.

## DIGITAL FINANCE

## XANTA

*Conversational AI powered Natural Transaction Assistant*

The new generation of customers are looking for simpler ways to interact remotely with their service providers and banks, and to avoid time-consuming call centres and complex graphical user interfaces. Digital technologies can considerably help achieve maximum flexibility and absolute convenience for customer engagement via e-channels. In 2018, the EIT Digital XANTA - Conversational AI powered Natural Transaction Assistant Innovation Activity - developed an intelligent computer-assisted dialogue system, which can provide customers with prompt service assistance anywhere, anytime.

XANTA has introduced an AI-based natural language driven front-end solution to enable the next-generation banking experience. The proposed methodology uses natural language processing techniques and AI tools to develop a specific banking sector semantic layer in multiple languages, and manage interactive conversations with customers similar to those with human operators. The XANTA solution would allow banks and companies to significantly reduce their operational costs, while maintaining strong and personalised natural language conversation with customers. The XANTA product is brought to the market by a new venture created as an outcome of this Activity, which has already secured its first bank customer to deploy the solution.

## APPENDIX II

INNOVATION & ENTREPRENEURSHIP  
SUCCESS STORIES: ACCELERATION

## DIGITAL CITIES

## NAVYA

With more than 200 employees in France (Paris and Lyon) and in the United States (Michigan), NAVYA (navya.tech) develops, manufactures and commercialises autonomous, driverless, and electric vehicles that combine robotic, digital and driving technologies at the highest level.

Since 2015, NAVYA has been the first to market and put into service autonomous mobility solutions, shuttles and cabs. NAVYA has a range of two autonomous vehicles: the AUTONOM® SHUTTLE, launched in September 2015, of which 100 have already been produced as of today and 67 sold in 16 countries as of March 31, 2018, notably in the United States, France, Germany, Switzerland, Japan and Australia, and the AUTONOM® CAB, unveiled in November 2017 and whose first road tests will start shortly.

The EIT Digital Accelerator supported NAVYA in their 2016 fundraising round with strategic coaching and introductions to industry relevant investors, leading to a €4.1m investment round fuelling the company's international expansion. Navya is now on a trajectory of fast growth, with a successful IPO on July 24, 2018, taking in €38m at a valuation of €190m. This is the first IPO of a company that EIT Digital helped grow.

## DIGITAL INDUSTRY

## METRON

Metron (www.metronlab.com) is a deep-tech scaleup with headquarters based in France and offices in Latin America, the Middle East, Singapore and Italy. Metron (www.metronlab.com) is a deep-tech scaleup with headquarters based in France and offices in Latin America, the Middle East, Singapore and Italy. Metron provides an energy intelligence platform to collect, aggregate and analyse all the energy and production data from industrial sites. By using AI algorithms, it allows energy savings and pinpoints optimisation potential in the production processes, thereby achieving a ROI in less than a year for its customers.

To grow their business, they looked for series A financing round. Metron engaged the EIT Digital Accelerator, with its pan-European presence, to support them in acquiring the capital. EIT Digital identified appropriate investors and coached Metron in pitching their business to the VC community. In the end, Metron secured €8m in financing from a mix of private and corporate VCs and a family office. Compared to other series A rounds, this is quite large and was the largest supported by EIT Digital so far.

## DIGITAL INDUSTRY

## KONUX

KONUX (www.konux.com) joined the EIT Digital Accelerator in 2014 after winning first prize in the EIT Digital Challenge contest. KONUX offers an industrial IoT solution combining smart sensors, data fusion and AI-based analytics to increase asset availability and optimise maintenance planning.

Within EIT Digital Accelerator KONUX benefited from sales trainings across Europe and expanded their network in the US through the EIT Digital Accelerator business development team and EIT Digital office in San Francisco. It is now an EIT

Digital Alumnus and well on track to scale, with a total of Series A financing of \$16 million, including prominent Silicon Valley VCs, and a recent completion of Series B funding of \$20 million. Its most prominent customer is the German railway, Deutsche Bahn.

## DIGITAL WELLBEING

CHECKPOINT  
CARDIO

More than 50% of the sudden deaths in the world are caused by heart related conditions. Checkpoint Cardio (www.checkpointcardio.com), founded in 2014 in Bulgaria, has developed patented wearables that allow constant streaming of cardiac and other significant biometric data in real time. This reduces visits to the doctor and can prevent sudden cardiac death. Their solution is comprehensive: Checkpoint Cardio provides a whole system for online diagnostics, prevention and emergency reaction for cardiovascular diseases.

Checkpoint Cardio was awarded a national prize for the most innovative company in Bulgaria in 2017 and its solution was ranked among the seven most promising business ventures at the Amsterdam Exhibition "The Next Web", involving more than 12,000 companies. To grow their business outside of Bulgaria, it is now benefiting from support to achieve its fundraising objectives from EIT Digital's Access to Finance team and help in its approach to key European markets from the Access to Market team. Thanks to this assistance, Checkpoint Cardio has already signed a new three-stage development contract with an international university hospital consortium. This includes €25,000 kick-off stage funding and further access to a €450,000 development and implementation budget to enhance its key system through the measurement of additional health parameters.

## APPENDIX III

### ENTREPRENEURIAL EDUCATION SUCCESS STORIES

#### EIT DIGITAL MASTER SCHOOL

#### DORA PALFI

Dora Palfi is an EIT Digital Master School student and co-founder and CEO of imagiLabs. Studying and working in the STEM field, Dora has experienced first-hand the lack of women in the sector.

She believes that one major root cause is that girls are not encouraged to be technology creators at a young age. This is why she conducted a research project with girls between 9-16 years old to understand what gadgets they wanted to use to learn programming – and turned the results into a viable product!

The EIT Digital Co-Location Centre in Stockholm provided the necessary space and resources to bring the project to life, and co-organised the MVP launch event at the Music Tech Fest in September 2018. The first product is a phone case with an embedded LED matrix, that can be programmed to display any text, design or colour using the imagiCase app. This lowers the barrier to entry to programming for girls in particular.

#### EIT DIGITAL MASTER SCHOOL

#### ROBERT CAROSI

Many students have a job on the side to finance their studies. However, that wasn't enough for 22-year old Robert Carosi,

who started his own business during the first year at EIT Digital's Master School. Carosi and three other students took part in a hackathon, organised by the Chamber of Commerce in The Hague, where a woman told a story about how she had become a victim of phishing.

The group had 24 hours to come up with a solution to help people like her; Robert's team met the challenge – and won €7,000. The students developed their concept further as part of their studies – specifically in the Ready to Startup course, where students learn to write a business plan. "We wanted to see how far we could take it – and came up with Phishermen." At the end of the course, they entered another competition and won a further €1,500.

Fuelled by their accomplishments and the enthusiastic atmosphere at EIT Digital, the students decided to take a chance and turn their idea into a business. In March 2017, Carosi registered the new company 'Phishermen' at the Chamber of Commerce. When a customer signs up to Phishermen, all the client's employees receive real but disarmed phishing emails. Any employee who isn't careful and clicks on links or opens attachments is confronted with a simulation of a computer virus. The shock-effect in the simulation is important to create awareness around the risks of phishing emails. "Making the fears and the risks discussable is the first step because people form the weakest link when it comes to IT security. Many companies invest a lot in firewalls and virus scanners, but not in the people themselves."

#### EIT DIGITAL DOCTORAL SCHOOL

#### JULIA WACHE

Dr. Julia Wache had completed a Masters in Cognitive Science and Biology at the Humboldt University of Berlin and the University of Vienna, before starting the EIT Digital Doctoral School in 2012. She graduated in December 2016 with a thesis on financing a startup.

At the EIT Digital Doctoral School, Julia learned to think and act like an entrepreneur. Her studies in innovation and entrepreneurship led her to combine her entrepreneurial ambition with research by her twin sister: to provide blind or visually impaired people with a sixth sense that makes their lives easier. Why not found a startup and turn this significant research into a business? Winning first prize at the Virginia Tech KnowledgeWorks Global Student Business Concept Challenge provided additional validation and \$25,000 to enable her to take the next step. Julia co-founded feelSpace, a company that now produces a vibrotactile compass belt that functions as a sixth sense – helping visually impaired people to orientate themselves. Thanks to a recent cash injection, the company has increased production and developed a game. Julia and her co-founders are preparing to take their sixth sense product across Europe.

#### EIT DIGITAL DOCTORAL SCHOOL

#### WILFRED DRON

Wilfried was in one of the EIT Digital Doctoral School's first PhD intakes, back in 2011. He was working on a thesis about wireless sensor network architecture, looking at devices with lifetime constraints. However, he found that batteries would be depleted before the product lifecycle ended. "So, I was searching for a tool that was able to provide me with information on the battery lifetime before even designing a device. Unable to find anything like that, I wanted to develop it and make this development the subject of my PhD".

By December 2014 he had found a possible answer for this problem, which had dogged the sector for some time. But he did not yet have the skills to convert the idea into a business model. Then, during the Innovation and Entrepreneurship programme (I&E) of the EIT

Digital Doctoral School, he mastered the necessary business skills to take his idea forward. The programme consists of an educational element providing training in innovation, management and business development. It also involved a "mobility" element, meaning he had the opportunity to go to Sweden for six months to explore research results. In those six months, he discovered that his product would indeed really fill a gap in the market. In order to make sure he could market his idea, he applied for a patent for his concept in 2015, before graduating later that year. The next step in his transformation from scientist to entrepreneur was starting an EIT Digital innovation activity. He successfully applied to EIT Digital's call for proposals alongside the Swedish laboratory, SICS and Spanish ATOS in January 2016.

After nine months Wilfried had enough confidence in his concept to found his own startup Wisebatt in September 2016, and with the help of EIT Digital, he recruited a talented team.

#### EIT DIGITAL PROFESSIONAL SCHOOL

#### DR ROLAND CLARKE

The EIT Digital professional education approach does not only cover the specialised programmes, but also invites seasoned experts and managers to join the EIT Digital students and participate in Summer School programmes. Dr. Roland Clarke, director of Clarke Energy Associates in Barbados, was looking to learn more about blockchain. As an energy consultant in the area of policy, he needs to learn about "the next big things". Peer-to-peer trading of energy by individuals is one of the "next big things", and blockchain

an enabling technology for that. The EIT Digital Academy Summer School on blockchain in Budapest popped up in Clarke's Google results.

He applied and ended up in a class full of EIT Digital Master School students and some other professional learners. How did he like being amongst all the students? "I learned a lot from these people. The students are a bonus of this Summer School. They have a technology background that I do not have. I can learn from them quite a bit. The lessons given by the instructors are very high level so when we work in groups, the students elaborate more about it. The students are a bonus of the Summer School".

And about the impact on his professional career: "I might even start my own business. Yes, I am inspired. In the Summer School, there have also been lessons in Innovation & Entrepreneurship. These courses have opened my eyes and are another bonus to me. Just these practical details on how to create a start-up, that is not technical at all. To me, it is opening my eyes concerning the psychology of innovation and entrepreneurship. I need that mindset. I have made mistakes in my business. This Summer School helps me understand how I made those mistakes and how I may shift to a better entrepreneurial mindset."

## EDUCATION, INNOVATION AND ENTREPRENEURSHIP

### XIN HU

EIT Digital Master School graduate Xin Hu's story is more than an EIT Digital education achievement. It is an ideal example of how EIT Digital drives education, innovation

and entrepreneurship in a closely integrated way and a flagship story about Europe's attractivity and deep tech potential.

As a Chinese student, Xin Hu chose Europe and EIT Digital for his graduate studies. Despite a full scholarship offering by the Erasmus Mundus programme, he chose to enroll on the Internet Technology and Architecture programme at EIT Digital. The entrepreneurial spirit of the EIT Digital Master School tipped the scales for Hu. After finishing his studies, he headed a team developing a product winning the CES 2016 innovation award. Not resting on his laurels, he accepted an offer by a Berlin startup as engineering lead for low-power wide-area-network (LPWAN) technologies, a key enabler for the connection of IoT devices.

Then an offer from an American billionaire that sounded too good to refuse, changed his path. The founder of the US company Ubiquiti, Robert Pera, was interested in Hu and his team and offered them several million dollars in cash and stocks in the listed company if they would come to work for him, in America. In a bold move, he refused the offer, reasoning "The million-dollar offer was a low price for our knowledge. It would be a one-time trade in a huge market. If we sold our knowledge, we would have nothing afterwards in a market that is worth much more than that." Consequently, he founded startup MatchX in Germany instead, a company developing decentralised Internet of Things networks. Two years after Hu graduated from the EIT Digital Master School, the first sales revenues came in.

## APPENDIX IV EDUCATION COURSES (SAMPLES)

### DIGITAL TECH

#### MASTER SCHOOL PROGRAMMES

- Cloud Computing and Services
- Embedded Systems
- Internet Technology and Architecture

#### ONLINE EDUCATION

- Automated Reasoning: satisfiability
- Standardisation
- Web Connectivity and Security in Embedded Systems

#### PHD THESIS TOPICS

- Architectural, planning, integration challenges and methods for 5G
- Complex machine learning solutions for segmented and fully distributed computing environments
- Predictive anomaly pattern recognition in complex communication networks

#### SUMMER SCHOOLS

- Big Data Analytics
- Cybersecurity and Privacy
- Internet of Things and Business Transformation

### DIGITAL CITIES

#### MASTER SCHOOL PROGRAMMES

- Autonomous Systems
- Cybersecurity
- Data Science

#### ONLINE EDUCATION

- Software Architecture for the Internet of things
- System Validation

#### PHD THESIS TOPICS

- High level programming language for big data analysis in smart cities scenarios
- Information fusion of video analysis in ADAS system
- Integration of LiFi communication in C-ITS architecture for smart cities environments

#### SUMMER SCHOOLS

- Citizen Participation and City Governance
- Predictive Analytics for an Efficient and Participative City
- Urban Mobility, Safety and Exploration

### DIGITAL INDUSTRY

#### MASTER SCHOOL PROGRAMMES

- Autonomous Systems
- Embedded Systems
- Human Computer Interaction and Design

#### ONLINE EDUCATION

- Architecting Smart IoT Devices
- Development of Real-Time Systems
- Web Connectivity and Security in Embedded Systems



PHD THESIS TOPICS

- Impact evaluation of additive manufacturing on supply chains
- Monitoring techniques to improve safety in robotic systems
- Time series model for environmental and industrial applications

DIGITAL WELLBEING

MASTER SCHOOL PROGRAMMES

- Cloud Computing and Services
- Data Science
- Human Computer Interaction and Design

ONLINE EDUCATION

- Development of Secure Embedded Systems
- Foundation of Mining Non-structured Medical Data
- Web Connectivity and Security in Embedded Systems

PHD THESIS TOPICS

- Cognitive computing for cognitive disability
- Designing calm: mitigating stressors in caregiving for older adults
- In Vivo electromagnetic study of human cerebral activity

SUMMER SCHOOLS

- Healthy Lifestyle and Behavioral Change
- Independent Living and Long-Term Care
- Longer Independent Living

DIGITAL FINANCE

MASTER SCHOOL PROGRAMMES

- Cloud Computing and Services
- Cybersecurity
- Data Science

ONLINE EDUCATION

- Quantitative Model Checking
- System Validation
- Standardisation

PHD THESIS TOPICS

- Blockchain oracles
- Customer profiling-based personalisation in financial systems
- Optimisation of internal processes in financial systems

SUMMER SCHOOLS

- Blockchains for Economic Security



APPENDIX V  
COLLABORATIONS

COMMISSION DG'S AND EU AGENCIES	
DG Connect / FI-PPP	Memorandum of Collaboration (MoC) signed in 2013. It took shape through two projects (I3H, coordinated by EIT Digital and FI-Core, with EIT Digital participation). The collaboration supported the sustainability of the FIWARE platform by a) creating a network of innovation hubs capable of fostering FIWARE adoption (I3H project, ended in 2016); b) disseminating FIWARE (FI-CORE, ended in 2016); c) making FIWARE available as a reference platform in relevant EIT Digital's innovation activities (e.g. CEDUS and Oedipus).
DG Connect / BDV-PPP	The private counterpart of the EC for the BDV-PPP. MoC signed in 2015. The first implementation of such agreement is EIT Digital's participation in the BDVe project (ongoing), where EIT Digital is contributing to: a) the construction of a big data oriented network of innovation centres and b) identification of new frameworks for construction of the new skills required by the big data economy. EIT Digital is exploring additional collaboration opportunities in the context of Horizon 2020.
DG Connect / FIRE+ (now in 5G)	Implemented through the SoftFire project in the area of SDN/NFV testbeds. The project is coordinated by EIT Digital.
DG Grow / Startup Europe	Implemented through EIT Digital's Silicon Valley Hub (ongoing), it involves the co-organisation of the SEC2SV (Startup Europe Comes to Silicon Valley) event in 2016 and 2017.
DG Connect / Cybersecurity	Project started in 2019, called CONCORDIA, aimed at establishing and operating a pilot for a Cybersecurity Competence Network, developing and implementing a common cybersecurity Research & Innovation Roadmap. EIT Digital's focus is in skills building: <ul style="list-style-type: none"> <li>• Pooling and disseminating existing courses</li> <li>• Packaged Cybersecurity Specific Methodology for new courses and/or teaching material creation</li> <li>• 3 nanoMOOC and 3 Micromaster</li> <li>• CONCORDIA certificate for courses</li> <li>• Contributing to building a European Education Ecosystem for Cybersecurity</li> </ul>
DG Connect / Digitizing European Industry	Implemented through: <ul style="list-style-type: none"> <li>• The MIDIH project. Coordinated by EIT Digital, MIDIH leveraging synergies with EIT Digital's Digital Industry Action Line, aiming to support the creation of a European network of Digital Innovation Hubs (DIHs).</li> <li>• A new project, QU4LITY, also leveraging synergies with EIT Digital's Digital Industry Action Lines. Scheduled to start at the end of 2018/beginning of 2019. Focus of the project is Zero Defect Manufacturing. EIT Digital's roles are:                             <ul style="list-style-type: none"> <li>▪ Bring ZDM to DIHs</li> <li>▪ Refine and deploy value proposition for DIHs</li> <li>▪ (Contribute to) Digital Business Innovation Platform</li> <li>▪ Contribute to Standardisation and Clustering</li> <li>▪ (Contribute to) building an ecosystem around QU4LITY</li> </ul> </li> </ul>
DG Connect / New Generation Internet	Collaboration implemented through participation in the AI4EU project. EIT Digital's role: <ul style="list-style-type: none"> <li>• Contribute to the consortium's education and training activities</li> <li>• Disseminate EIT Digital's own (Summer Schools, PFL courses)</li> </ul>
DG JRC	<ul style="list-style-type: none"> <li>• EIT Digital is actively exploring collaboration opportunities, both within the framework established by EIT and through direct discussions with the DG JRC.</li> </ul>

OTHER EUROPEAN ACTORS	
<b>FIWARE Foundation</b>	EIT Digital collaborates with the FIWARE Foundation to support its efforts in picking up the baton of the FI-PPP and deploying FIWARE within Industry and City domains. The collaboration has materialised through: a) the joint rental of a space in Berlin shared by the Berlin Node and the FIWARE Foundation, to facilitate exchange and joint work; b) the joint participation in H2020 projects, e.g. MIDIH; c) EIT Digital support of FIWARE deployment in the Industry and Smart Cities areas (e.g. CEDUS Innovation Activity; Oedipus III) and through specific projects such as the Select4Cities PcP and MIDIH.
<b>The European Telecommunications Standards Institute (ETSI)</b>	MoC signed in 2014, with the aim of sharing information and aligning activities. It builds on the role played by ETSI in setting up operational standards and on the role played by EIT Digital in deploying technologies and products that have to meet those standards. ETSI is supporting SoftFire's standardisation activities in the SDN field.
<b>Digital Skills and Job Coalition</b>	In January 2017, EIT Digital became a member of the Digital Skills and Job Coalition.
<b>European Business Angels Network (EBAN)</b>	EIT Digital has started discussions with EBAN about possible synergies that could help strengthen its Venture Programme (EIT RIS Area) by connecting the established ventures with the national and international networks of business angels.
<b>The European Investment Fund</b>	MoC signed in 2013 with the aim of working together towards improving the prospects for European ventures and entrepreneurs in accessing investment funds. The collaboration struggled to take off and is now dormant.

NATIONAL ACTORS	
<b>France: ANRT (Association Nationale de la Recherche et de la Technologie)</b>	CIFRE programme: PhD funding programme in France.
<b>Finland: Business Finland</b>	To be involved in (and potentially coordinate) a select number of Business Finland growth engine activities, to bring a European dimension, scaleup support, and entrepreneurial education to Business Finland growth engines.
<b>Germany: Software Campus</b>	To transition advanced students with high potential from EIT Digital to Software Campus and vice versa in education, innovation and business.
<b>Hungary: Irinyi Plan</b>	To support Hungarian industrial strategy development, in particular for Industry 4.0.
<b>Hungary: Centre for academia-industry cooperation</b>	To participate in the ecosystem of the leading Hungarian universities, research institutes and industries active in the field of computer science and computer engineering.
<b>Hungary: Artificial Intelligence Coalition</b>	A government-led initiative to jointly shape and frame the direction of AI-related development in Hungary. To participate in the creation of the country's AI strategy and in the analysis of related societal and economic challenges.
<b>Hungary: 5G Coalition</b>	To support Hungary's aim to become one of the European development centres of 5G application development and testing; enabling the country to be among the first to introduce 5G in practice.
<b>Hungary: ZalaZone, Automotive Proving Ground</b>	The government-initiated project builds an optimal test environment for future (autonomous) cars and their communication technologies at several levels and contributes to the testing of these from concept to final product status.
<b>Italy: Ministry of Education, Universities and Research, National Research Programme 2015-20</b>	To access funds that are allocated for the participation of Italian organisations in KICs, in order to co-finance EIT Digital activities in Italy.
<b>Italy: Ministry of Education, Universities and Research, National Cluster – Smart Communities</b>	Collaboration and strategic alignment with the technological roadmap to enhance the impact of EIT Digital activities.
<b>Netherlands: Knowledge and Innovation Agenda 2016-2019</b>	To stimulate public-private partnership to implement this agenda in the Netherlands, together with EIT Digital partners TNO and CWI.
<b>Spain: National Government, Ministry of Education, Universities and Research) – National Research Programme 2014-20: International Campuses of Excellence</b>	Use PhD and post-doc scholarships to integrate students in innovation activities and complement existing programmes with EIT Digital innovation.
<b>Sweden: Urban ICT Arena</b>	The Innovation Activity "ACTIVE" deliverable Activ8 provided as one part of a common platform for open innovation, aiming for sustainable, urban, digital innovation in Stockholm/Kista together with the partners in the activity. Hack Challenge, an open hackathon on the Activ8 IoT middleware with an open API.
<b>Sweden: Vinnova, Tillväxtverket, Energimyndigheten, Vetenskapsrådet</b>	EIT Digital partners are engaged in joint national open innovation projects and proposals, and scouting startups for the EIT Digital Accelerator programme (KTH Innovation, STING, Ericsson One).
<b>United Kingdom: Digital Catapult and Future Cities Catapult</b>	Jointly plan and deliver open events, cross-refer promising digital organisations, maintain good cross-organisational understanding, as the focus of the Catapult organisations is complementary to EIT Digital.

## APPENDIX VI

### KEY PERFORMANCE INDICATORS

Table 1: Selected EIT Digital impact and growth development as measured by key performance indicators (KPIs).

AREA	KPI	2020	2021	2022
Ecosystem	Partners in the ecosystem	210	230	250
Ecosystem	EIT Digital locations	17	17	17
Ecosystem	People working daily at EIT Digital locations	300	400	500
Innovation & Entrepreneurship	Products launched on the market	80	85	90
Innovation & Entrepreneurship	Startups created	30	40	50
Innovation & Entrepreneurship	Annual intake of scaleups into Accelerator	40	45	50
Innovation & Entrepreneurship	Total investment attracted by supported and alumni scaleups	€550m	€675m	€800m
Education	Annual Master School intake	600	700	800
Education	Annual Professional School learners	800	1500	2100

## APPENDIX VII

### ACRONYMS

ACRONYM:	EXPLANATION:
<b>EIT</b>	European Institute of Innovation & Technology (eit.europa.eu). EIT is an independent EU body enhancing Europe's ability to innovate by nurturing entrepreneurial talent and supporting new ideas. EIT Digital is one of EIT's Knowledge and Innovation Communities (KIC).
<b>BVD-PPP</b>	A partnership between the European Commission and the Big Data Value Association (BDVA). The partnership aims to create a functional Data Market and Data Economy in Europe, in order to allow Europe to play a leading role in Big Data in the global market.
<b>CLC</b>	Co-location Centre. CLCs are hotspots where talents cross-pollinate to create value: students take classroom courses or study, innovation activities are conducted in agile settings, startups and scaleups are hosted. EIT Digital staff work out of CLCs.
<b>I&amp;E</b>	Innovation & Entrepreneurship. EIT Digital Master, Industrial Doctoral and Professional Schools offer I&E modules and courses in their education programmes.
<b>IoT</b>	The Internet of Things (IoT) is the network of devices such as vehicles, and home appliances that contain electronics, software, actuators, and connectivity which allows these things to connect, interact and exchange data.
<b>KIC</b>	Knowledge and Innovation Communities. KICs are partnerships that bring together businesses, research centres and universities.
<b>MIDIH</b>	The MIDIH "Manufacturing Industry Digital Innovation Hubs" ( <a href="http://www.midih.eu/">http://www.midih.eu/</a> ) project aims at realising services to support the ICT Innovation for Manufacturing SMEs. EIT Digital is a MIDIH partner.
<b>MOOC</b>	A Massive Open Online Course is aimed at unlimited participation and open access via the web. EIT Digital offers a rich selection of MOOCs via the Coursera online learning platform.
<b>MVP</b>	Minimum Viable Product is a product with just enough features to satisfy early customers, and to provide feedback for future product development.
<b>ARISE</b>	EIT Regional Innovation Scheme. EIT Digital serves the whole of Europe through the EIT Regional Innovation Scheme (RIS) programme, known as ARISE. This programme develops opportunities for innovation growth in countries and regions in Europe that belong to the groups of so-called 'modest and moderate' innovators.
<b>T-shaped</b>	EIT Digital strongly believes in T-shaped talent who are equipped not only with the solid technical knowledge to truly access and develop the value of technology, but also with the necessary entrepreneurship and business skills to spot opportunities, understand market needs and capitalise on them. All EIT Digital education programmes have this approach as a core ingredient.
<b>5G</b>	The 5th generation of mobile communications.



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