eit Digital

Annual Report
2016

European
entrepreneurs
driving digital
innovation
& education

Contents

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As 2016 closes, we have paved the way for 2017-2019 Strategic Innovation Activities with a proven track-record:

Pan-European Ecosystem

26 new partners added of which 22 were industrial partners

A total of over 130 partners including educational or industrial organisations

Innovation and Entrepreneurship

9 new companies created

75 products and services commercially launched

Over 120 startups coached by the EIT Digital Accelerator

€22m in capital raised for startups

Entrepreneurial Education

More than 500 students were enrolled in one of our eight Master programmes

More than 140 students have been studying in the Doctoral School in seven countries (including 30 new students)

Over 20 courses launched for professional students

Over 20,000 students have taken EIT Digital's 25 Massive Open Online Courses (MOOC)

"Value creation, market orientation and return on investment are all key drivers for impact and sustainability."

Raymond Freymann
Chairman, Executive Steering Board, EIT Digital

Foreword

It is with great pride that I look at the achievements of our organisation in 2016. Our vibrant ecosystem has been strengthened by new partners joining our network and by the promise of Budapest and Madrid becoming full Nodes. We've seen more and more students graduating from our entrepreneurial education programmes as highly motivated, skilled digital experts with the right mind-set to drive Europe's digital transformation. And we've seen a growing impact from our innovation and entrepreneurial activities in the shape of increased market take-up of our products and services and ever more successful scaleups supported in the rapid expansion of their businesses.

With respect to the three key topics on our agenda, governance, impact, and sustainability, I am happy to report that 2016 saw us complete the remodelling of our corporate governance. As a result, our organisation has become much simpler and more geared towards an impactful and sustainable future.

As for impact and sustainability, they go hand in hand. In 2016 we made significant steps to further increase the impact of our organisation and activities. Value creation, market orientation and return on investment are all key drivers for impact and sustainability. We delivered a comprehensive sustainability plan and many elements of it have already been deployed. Although there is still some way to go, I am confident that we will find the right diversification of our revenue sources to further improve the sustainability of our organisation.

Finally, I'd like to highlight the role of our Co-Location Centres as vibrant meeting places where our students, innovators, business developers and entrepreneurs come together to create showcases of innovation. Fundamentally, innovation is about people and I am deeply convinced that it's the highly committed people and partners that form the main pillar of EIT Digital. It is in this context that I see my role as one of encouraging a true sense of community across our ecosystem and at every level of the organisation.

Willem Jonker
CEO, EIT Digital

CEO Statement

"Sustained impact" has been our motto for 2016. Sustained impact through the signing in January of the new seven-year Framework Partnership Agreement with EIT, which forms the basis for our collaboration with EIT for the period 2016 – 2022. Sustained impact through the delivery of our Strategic Innovation Agenda 2017 – 2019 that will guide the development of our organisation for the next three years. Sustained impact through the continuous and growing delivery of entrepreneurial graduates from our education programmes. Sustained impact through the increasing market uptake of the results from our Innovation Activities. Sustained impact through the growth of the scaleups in our Accelerator portfolio. And finally, sustained impact through the development of a comprehensive sustainability plan of which several elements have already been deployed.

In 2016 EIT Digital again witnessed an expansion of its partnership network with 26 partners (including linked third parties) joining our community. Our organisation has been simplified through a new governance structure and the decision was made to transform the associate partnerships groups in Budapest and Madrid into full Nodes by the 1 January 2017

to further fuel their growth and impact. The ARISE programme expands our activities beyond our nine core EU countries (Finland, Sweden, Germany, The Netherlands, UK, France, Hungary, Spain, Italy) through regional Digital Innovation Centres in Estonia, Poland, Czech Republic, Slovenia, Portugal, and Greece. Our Hub in Silicon Valley has expanded its activities through an intensified collaboration with US universities, Coursera, and industry partners as part of the development of our US industry programme.

Our education programmes have had a stable year. We were happy to welcome over 300 new students during the kick-off in October in Rennes, although the number was somewhat below our target. On the other hand, 135 Master students graduated in November at a ceremony in Stockholm. In addition, with over 60 applications for 20 available positions, we successfully introduced a Post-Master programme that allows alumni from our Master School to work for one or two years at our Co-Location Centres (CLCs) in our Action Line activities. Patrick Hartigan became our new Master School head in April.

Our Doctoral School delivered its first three graduates during the Partner Event in April in Brussels. The Doctoral School is strengthening its CLC presence and a new Industrial Doctorate model was introduced with a stronger involvement of our industry partners, by the end of 2016, 30 PhD students had been enrolled in this new programme. At the end of 2016, the mandate of Maurizio Gabbrielli expired; we thank Maurizio for his contributions to the EIT Digital Doctoral School.

Our Professional School did deliver several courses in 2016, while trying to find the right strategy to realise the envisioned scaling. We thank Frank Gielen who left our organisation in the course of 2016.

Our on-line activities had a very successful year, especially with the delivery over the summer of the first EIT Digital MOOCs on Coursera. In the last six months of 2016 more than 30,000 active learners were engaged in our courses.

And of course, we also ran nine Summer Schools, organised on topics aligned with our Innovation Action Lines which attracted some 378 participants.

2016 was a very successful year for our Innovation and Entrepreneurship activities. Our change to a more focussed, market-oriented approach with clear business owners bore a significant increase in results. Compared to 2015 the number of knowledge transfers increased by more than thirty per cent and the number of new products and services launched to market more than doubled.

With the delivery of our Strategic Innovation Agenda 2017-2019, a new, simplified and more focussed portfolio of four Innovation Action Lines was introduced: Digital Infrastructure, Digital Wellbeing, Digital Cities, and Digital Industries. Also, we started an exploration in the domain of Digital Finance. We thank our former Action Line leaders Gilles Betis, Jovan Golic, Janne Järvinen, and Jean Gelissen, for their valuable contributions to EIT Digital.

The total investment raised for the Alumni and current portfolio reached an impressive €250m.

During the second half of 2016, a new term-sheet was introduced requiring a return on investment for our expert services to scaleups – a key part of our drive towards increased sustainability.

With the arrival of Edna Ayme-Yahil as Head of Communications in March, we started implementing our new strategy towards a more visible EIT Digital. Through a comprehensive, campaign driven, communications strategy we have increased our visibility in traditional (and especially tier-one) media and across all our social media platforms (Facebook, Twitter and LinkedIn). We organised our first EIT Digital conference in Brussels and attracted over 500 attendees. Through our results days, we increased our visibility in our Nodes. As co-organiser of Startup Europe Comes to Silicon Valley, we increased our visibility in the Bay Area. Via our Challenge competition, we have permanent visibility in the startup and scaleup communities. And last, but not least, our Alumni organisation plays an important role in mobilising a vibrant community of EIT Digital ambassadors with a global reach.

The achievements of EIT Digital are the achievements of our partners and their participation in our activities. I want to thank our partners for their commitment, for their strong and increasing delivery, and for their support in creating a future-proof and sustainable EIT Digital. Thanks to all our researchers, innovators, teachers, students, entrepreneurs, business developers, investors, activity leaders, Action Line leaders, communication team members, staff in our Nodes and staff supporting our activities. I am privileged to meet many of you on various occasions and I am always impressed by your commitment. Thanks for your contribution to the success of EIT Digital!

Willem Jonker
CEO EIT Digital

Chahab Nastar
Chief Strategy Officer

EIT Digital's Strategy

EIT Digital is a leading European organisation driving Europe's digital transformation. Our mission is to deliver breakthrough digital innovations to the market and to foster entrepreneurial talent - for economic growth and improved quality of life in Europe.

In order to deliver on our mission, our strategy relies on the following pillars:

1. Innovation & Entrepreneurship investments in activities that accelerate the market uptake of digital technologies.

2. Entrepreneurial Education investments in activities that bring entrepreneurial skills and digital leadership to Europe.

3. Activities that we support are carried out by our pan-European ecosystem of Partners and are centred around our pan-European co-location centres, physical spaces where we promote cross-pollination and an agile way of working.

In order to create pan-European impact and critical mass, our investments are clustered in integrated "Action Lines" - portfolios of thematic activities targeting impactful outcomes. Each Action Line is focused on supporting its activities to scale at the pan-European level and beyond.

Our Innovation & Entrepreneurship strategy is driven by Innovation Action Lines that have been strategically chosen with respect to major digital trends and European leadership potential. In 2016, these Innovation Action Lines were: **Digital Infrastructure, Digital Cities, Digital Industry,** and **Digital Wellbeing.**

Each Innovation Action Line sources two types of selected entrepreneurial projects:

Innovation Activities

Innovation Activities, sourced through the EIT Digital partnership, are awarded through an annual open and transparent process of Call for Proposals. These activities are based on agile cooperation between EIT Digital's partners to typically turn research results and technologies into products with a business model. They follow an incubation stage throughout the year with the objective of having early market traction at the end of the year.
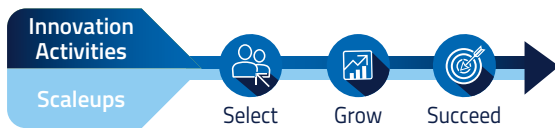

Figure 1.

Scaleups

Fast-growing startups (a.k.a. scaleups) entering the EIT Digital Accelerator are sourced either through the annual pan-European contest "EIT Digital Challenge", or through direct scouting. These companies are typically more mature – they have already reached product/market fit and are scaling-up rapidly.

The integrated Innovation Funnel is managed by the **EIT Digital Accelerator**, a pan-European distributed team of business developers working out of our co-location centres. They support the innovation portfolio of Innovation Activities and scaleups. The Accelerator's mission is to support the growth of these entrepreneurial projects so that they become successful European products or ventures.

To take up the grand challenges of our time and to feed the needs of tomorrow's industry, Europe needs a new generation of professionals with both excellent digital knowledge and the entrepreneurial mindset to transform ideas into products. That observation is the basis of our Entrepreneurial Education strategy. Our ambition is two-fold:

- Educate a new generation of digital thought leaders, innovators, and knowledge workers by providing excellent technical programs with deeply embedded innovation and entrepreneurial education.

- Build a strong entrepreneurial education brand via a disruptive and systemic change to European higher education that will attract top talents to Europe.

EIT Digital adopts a Blended Education approach where students develop cutting-edge digital knowledge merged with innovation and entrepreneurship skills (figure 2). The settings can be physical or virtual classrooms or combinations of both. This approach yields three Education Action Lines. Our **Master School** breeds a new generation of European digital entrepreneurs, our **Doctoral School** delivers tomorrow's digital leaders, and our **Professional School** keeps European professionals at the forefront of the ever-changing digital trends.

The education programmes feature a strong European dimension with geographical mobility and frequent teambuilding activities and are enriched through interaction with innovation activities at our co-location centres. They are conducted, as joint European efforts, by highly ranked European technical universities. They provide accredited degrees (single, double or joint) together with an EIT-labelled certificate.

Figure 2.

Entrepreneurial Education

Anders Flodström
Education Director

Entrepreneurial education teaches creative, innovation and business skills to engineers and researchers. It is the fostering of these skills that makes the EIT Digital Academy different from mainstream Master and Doctoral education.

As you might expect, our students delve deep into technical subjects and become skilled in the use of technology. However, in Europe EIT Digital is unique in systematically pushing entrepreneurial education alongside the core technical subjects.

We provide modules for business creation and innovation case studies. We also offer industrial internships which provide the ideal setting to develop robust entrepreneurship skills and training. Why do we do this? An educated entrepreneur will push new ways to invent, will increase quality, will push their business to scale up and to make that business thrive.

There are however a number of challenges that we as Entrepreneurial Educators need to tackle - namely:

- How do we recruit students with the talent and motivation to maximise what they gain from their education programme?

- How do we learn from industry which skills students need to be effective in the dynamic digital labour market?

- How do we scale-up and reach out to European and global students in different environments and under different economic constraints so they can easily choose an affordable entrepreneurial education?

The advent of the internet and the unlimited virtual interactive communication it facilitates has transformed education.

Today an equal number of students study online as those in universities. Any educational venture can, at very reasonable costs, become a global player and reach hundreds of thousands of students.

The EIT Digital Master School's Micromaster on "Embedded Systems: Internet of Things" reached over 100,000 learners. By comparison, the Campus equivalent recruits about 50 students each year.

So by using online learning, we've extended our reach and made our courses accessible to far greater numbers of students. However, an integral part of teaching skills is to encourage learning by doing and learning in industrial and academic environments where newness is promoted.

The new challenge we're therefore addressing is how to combine learning with online teaching. We discuss this in our section on Blended Learning later in this report.

Looking ahead, we see the way industrial companies operate and the way they recruit and retain employees with digital competencies will evolve. With that, we'll see enhanced collaboration between industrial and societal stakeholders in how we educate future engineers and researchers. The journey is just beginning.

The EIT Digital Master School's Micromaster on "Embedded Systems: Internet of Things" reached over 100,000 learners.

Innovation & Entrepreneurship

Our Innovation & Entrepreneurship strategy is described in the "EIT Digital Strategy" section. It is driven by Innovation Action Lines that have been strategically chosen with respect to major digital trends and European leadership potential, and managed by the EIT Digital Accelerator. In 2016, these Innovation Action Lines were: **Digital Infrastructure, Digital Cities, Digital Industry**, and **Digital Wellbeing**.

2016 has seen an 80% increase in startups from Innovation Activities... and a 15% increase in companies supported

Each Innovation Action Line is a business unit led by an Action Line Leader, a manager with domain expertise, leadership and program management skills. The Action Line Leader manages the portfolio of activities in his or her Action Line. As detailed in the "EIT Digital Strategy" section, the portfolio is made up of Innovation Activities and Scaleups.

In collaboration with the Action Line Leaders, the Integrated Innovation Funnel is managed by the EIT Digital Accelerator, a distributed team of business developers and fundraising experts working out of our Co-Location Centres (CLC).

The Accelerator's mission is to support the sourcing and the growth of these entrepreneurial projects so that they become successful European products or ventures.

Innovation Activities	Select	Grow	Succeed
Scaleups			
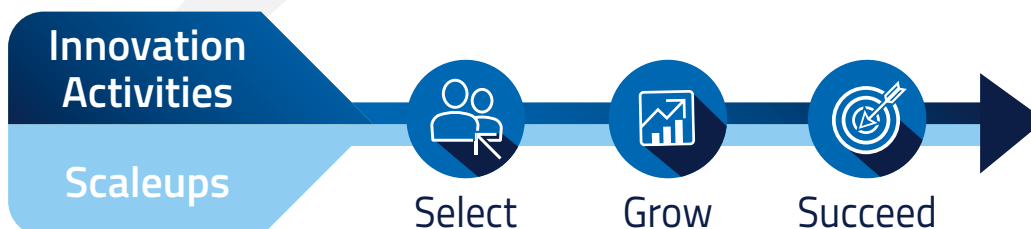
In addition to organising the pan-European startup contest - EIT Digital Challenge - that is used as a sourcing instrument for the Accelerator, the main services of the Accelerator are:

- Pan-European Access-to-Market (customer acquisition)
- Pan-European Access-to-Finance (fundraising).

We are happy to report that 2016 was a very successful year for the Innovation & Entrepreneurship pillar, as shown by our KPI evolutions.

With respect to Innovation Activities, the emphasised focus on go-to-market led to an increase of KPI "Knowledge Transfers" of 32% (75 Transfers in 2016, up from 57 in 2015).

The KPI "New/Improved Products or Services" increased by an impressive 142% (75 products in 2016, up from 31 in 2015).

In 2016 we also created nine startups out of Innovation Activities, versus five in 2015 – that is a 15% increase.

With respect to Scaleups, we supported 129 companies, in 2016, versus 112 in 2015, a 15% increase. The shift to more mature companies as part of our pan-European strategy, is visible in the following KPIs:

- The average team size was 16 in 2016, a 47% increase from 2015
- The average revenue was €1.24m, 60% larger than in 2015
- The average valuation was €7.55m, 54% larger than in 2015.

Accelerator and Access to Finance

The EIT Digital Accelerator supports European digital ventures to scale up their business throughout Europe and beyond by helping them find customers and raise capital.

Following a shift in 2015 to focus on scaleups – fast-growing technology startups ready to scale internationally – the EIT Digital Accelerator further improved its offer to meet exactly the needs of these companies, focusing on two areas in particular: **Access to Market** (A2M) and **Access to Finance** (A2F).

The **Access to Market** team supports companies with qualified lead generation via events, meetings and targeted introductions across Europe. They also help companies by developing and defining their go-to-market strategy and facilitating soft landings in new countries.

The A2M team comprises over 40 business developers with diverse backgrounds, operating from 10 different European countries as well as EIT Digital's Silicon Valley Hub in the United States.

In 2016, the A2M team facilitated over 2,500 leads for its portfolio of scaleups via 45 events and trade shows all across Europe. This translated into €14m of closed and follow-up deals.

In 2016, the Access to Market team facilitated over 2,500 leads for its portfolio of scaleups

The **Access to Finance** team provides the portfolio of scaleups with the fundraising guidance, preparation and investor connections they need to raise Series-A stage investment (€1m-€10m). With trusted relations with over 300 international private and corporate venture capital firms, the team can identify optimal investors for any of the supported scaleups.

The focus on later-stage investments has led to a constant increase in the average investment size secured by the supported companies: while the average investment size for Accelerator portfolio companies in 2014 was just in excess of €500,000, it increased to €1.75m in 2015 and €2.7m in 2016. The focus of the team is to address both traditional financial investors and corporate venture funds, a growing category of investors understanding the added value that innovative scaleups can bring to their future business.

In total, the A2F team facilitated eight fundraisings in 2016 with a total volume of €22m. These investments included a €6m fundraising by Distribusion, a German B2B travel tech company in March 2016, and a funding round involving Robert Bosch Venture Capital for the Dutch cyber-security scaleup SecurityMatters.

With the funding rounds in 2016, the total amount of investment facilitated by the A2F team has now crossed the €80m mark. Counting investments also raised by Alumni, overall, EIT Digital supported companies have raised €250m in funding.

Meanwhile, 2016 also saw the third edition of the EIT Digital Challenge, one of the largest contests for digital technology startups in Europe organised by the EIT Digital Accelerator. Following the announcement of the new Action Lines (Digital Industry, Digital Cities, Digital Wellbeing and Digital Infrastructure) and a new Exploration Area (Digital Finance), the Challenge aimed to identify the most promising scaleups from all across Europe within these categories.

234 innovative companies from 25 European countries applied to the contest. In five separate finals – one per category – the best teams competed for the chance to join the Accelerator and get connected to EIT Digital's pan-European network, as well as a cash prize of €50,000 for the winner of each category.

In the end, 16 teams were selected to join the EIT Digital Accelerator and get international growth support. All winners met with the Accelerator team at "Ignition Days" in Berlin in December to kick-start their growth, and we are looking forward to helping them scale up their businesses in 2017.

"With this financial support, we will be able to grow our team and roll out our business on a global scale."
Julian Hauck, CEO Distribusion.

"With these investments SecurityMatters will now be able to establish its presence globally and compete with the largest players across the globe. When we created the company seven years ago, we had a precise idea of the technology we wanted to put to work, and gradually we kept our objective to provide the best-in-market product. Now, with a proven solution and the support of EIT Digital, we secured Robert Bosch Venture Capital as one of the strategic investors in our company."
Damiano Bolzoni, CEO and co-founder of SecurityMatters.

Berlin
Node

EIT Digital is present in Germany through the Berlin Co-Location Centre (CLC) and its satellite office in Munich, hosted by the partner institution fortiss GmbH. Since the Berlin Node was established, it has built a strong network of partners in the field of entrepreneurial education and innovation in Germany. The close ties to the German partners as well as the regular contact with them facilitated various collaborations and ensured their involvement in the KIC's activities.

2016 highlights

Clearly, a highlight in 2016 was the joining of the two new industrial affiliate partners Airbus and Huawei in Germany. Furthermore, the Berlin Node hosted two High Impact Initiatives: Street Smart Retail and Operate European Digital Industry with Products and Services. Representatives of the Berlin Node's partner organisations have made regular use of the CLC's meeting rooms and technical facilities. In total, more than 2,500 people participated in some 200 meetings, workshops, and events at the CLC. Overall, in 2016 utilisation of the CLC ran at 81%.

Many new proponents of Berlin's thriving entrepreneurial ecosystem have discovered the Berlin CLC and the work of EIT Digital in Germany through workshops and events such as the Founders' Pit Stop format. In this regular networking event, topics relevant to startup development such as "PR for Startups", "The Art of Networking", "Team Management", and "VC Financing" were presented by expert speakers from the local Node ecosystem and discussed in a lively setting – ultimately allowing the profile of EIT Digital in Berlin to be raised further. Germany has again been one of the favourite destinations for international participants in the EIT Digital Master School. In the current 2016/2017 academic year, 117 students have selected Germany as their first- or second-year destination with the Embedded Systems technical major being the most popular course of study.

Finally, the Berlin Node continues to be successfully involved in national programmes: The leadership qualification program Software Campus (SWC), managed by the Berlin Node, started its sixth round in 2016. In total, 212 young IT experts and leadership talents have been enrolled since the kick-off in 2011. At the third SWC Summit in February, more than 30 Doctoral and Master students presented their research projects at a high-level conference in Berlin. By the end of 2016, around 100 had successfully completed the programme. The German Federal Minister for Research and Education, Prof. Johanna Wanka awarded 15 participants their final certificates at CeBIT 2016 in Hannover.

Udo Bub
Node Director

Eindhoven
Node

The Eindhoven Node is located at the High Tech Campus in Eindhoven, the smartest km² in Europe with hundreds of companies, startups and institutes working on future technologies. In this ecosystem, the Co-Location Centre (CLC) is known as a vibrant place where students, partners and entrepreneurs meet and work. The CLC offers 36 working places; on an average day, 32 of these places are occupied.

The Eindhoven CLC is the basic innovation centre for Innovation Activities in the Digital Wellbeing Action Line. Our partners have the lead in six of these Innovation Activities - Professionals Fit to Perform, Affective lighting for novel grocery retail experiences (Aligre), GameBus, Lumipark, Personal Information Management Ecosystem (PIME) and, Better nights, fresh days.

2016 highlights

The CLC in Eindhoven can look back on a successful year.

The commitment by the Dutch partners was confirmed by their strong participation in relation to the bid for future Innovation Activities (Call for Proposals, 2017). Dutch partners are involved in 13 unique Innovation Activities.
We are very proud to have welcomed three new partners (including linked third parties) into our pan-European network: BrightCape, Philips Consumer Lifestyle and Philips Lighting. This brings the total number of Dutch partners to 18.

In 2016, the Eindhoven Node welcomed 116 Master School students for the academic year 2016-2017 to study at our partner universities - University of Twente, The University of

Technology Eindhoven and Delft University of Technology. The Digital Wellbeing Summer School was attended by 44 international students, including some employees from our partners.

In 2016, we hosted 36 meetings and events at the CLC. In addition, we also hosted the annual Innovation Day, where we showed off our Innovation Activities to a 250+ audience and four so-called "pizza-sessions" where partners invite students into their company. These sessions make access to talent tangible and help students in building a network.

EIT Digital CLC Eindhoven invested in cooperation with the Dutch ecosystem on innovation and entrepreneurship - we cooperated with Startup Delta in Startup Fest Europe and started to work together with other KICs.

In terms of Business Development and Access to Finance, we saw an increase with 17 scaleups supported by the EIT Digital Accelerator in the Netherlands in 2016. The Access to Finance service was at the origin of a fund leverage of almost €5m in 2016 for the scaleup Security Matters.

Our successes have resulted in a growth of almost 15% of the staff and occupants of the CLC and not to mention: a visit from the Belgian King and Queen.

Patrick Essers
Node Director

Helsinki Node

In 2016 the Helsinki Node promoted the cause of its partners by identifying six focus areas and created a roadmap of activities and instruments for each focus area. Substantial parts of those roadmaps were implemented through EIT Digital in addition to national and other EU entities.

The Helsinki Node led one of the four EIT Digital Action Lines: Digital Industry. During 2016, the Helsinki Co-Location Centre (CLC) hosted two High Impact Initiatives, Trusted Cloud and ACTIVE (Advanced Connectivity Platform for Vertical Segments), and contributed to Street Smart Retail High Impact Initiative. The partner network of the Helsinki Node comprises 15 partners, out of which nine are academic and six industrial.

One of our academic partners, Aalto University, provides both EIT Digital Master and Professional School education. A total of 36 students enrolled in the Master School programme and 21 in the Doctoral School at Aalto in 2016. Turku University contributed to EIT Digital's online education provision by developing Massive Open Online Courses (MOOC).The usage of CLC premises in the Innovation House on Otaniemi campus was consistently high, welcoming approximately 70 people each day. A big contributor was the High Impact Initiative ACTIVE, led by Ericsson, where the project team moved full-time to the CLC. In addition, the CLC hosted Master and Doctoral school students, events, call clinics, visits and lunch talks. Our CLC was also home to a dozen of our supported startups at any one time.

2016 highlights

The Helsinki Node has systematically built a dynamic and diverse local ecosystem that is recognised as a global innovation hot-spot. Our Digital Industry of Tomorrow event organised in conjunction with international startup event Slush was well received with two hundred EIT Digital stakeholders and influencers participating. It also incorporated the end of the year event of the Digital Industry Action Line. In October, more 40 key stakeholders of Finnish innovation system participated in our Strategic Innovation Agenda launch event at the Helsinki Europe hall.

At our CLC, we hosted more than 60 events, of which 15 were lunch talks, 14 related to EIT Digital Education activities, more than thirty CLC events, and the EIT Digital Smart Spaces Summer School which welcomed some 42 students.

The Digital Industry Business Community generated 351 leads altogether, closed 13 deals and €9m in startup funding. Our business developers were able to successfully close the first deal incorporating EIT Digital Accelerator's new term sheet. The Helsinki Node is influencing the national ICT agenda through regular discussion with the Ministry of Employment and the Economy. We have also continued to utilise the links to two Finnish Members of European Parliament, Henna Virkkunen and Nils Torvalds.

In 2016 the Helsinki Node developed alternative sources of income at the national level. In 2016, had three non-EIT funded projects on-going, we also prepared joint projects with national funding agency Tekes for the next call. There have also been joint activities with EIT Raw Materials and Climate KIC.

Tatu Koljonen
Node Director

London
Node

2016 was a productive year for the London Node. We strengthened our delivery team, accelerated new scaleups, launched new Innovation Activities, hosted outstanding events and a great summer school, and prepared for our next stage of growth in the UK.

2016 highlights

Throughout the year we helped and hosted two fast-growing startups at our London Co-Location Centre (CLC). 3dRepo, a "Digital Cities" startup providing award-winning cloud-based building information modelling (BIM) tools and Soma Analytics, a "Digital Wellbeing" startup focused on research-based digital solutions for workplace stress.

The London Accelerator team was pleased to sign formal term sheets with two very promising scaleups. Apply Mobile provides cutting-edge end-to-end security and identity B2B solutions for mobile workforces. Origone uses artificial intelligence and cognitive algorithms to provide comprehensive IT infrastructure security systems, and with our assistance, won 1st place at the European/American Pitch Awards Competition during MatchFest at CES 2017.   The London Accelerator team is continuing to help these companies, and others, access new markets and significant financing.

On the innovation front, 2016 saw the launch of "Trusted Data Safe Havens for Healthcare". This activity, led by the University of Edinburgh with participation by BT, will create secure and confidential approaches for combining national sets of patient healthcare data across international boundaries for use by medical researchers.

In 2016 London partners continued their deep engagement in two High Impact Initiatives, "Professionals Fit to Perform" and "European Trusted Cloud Ecosystem".   In both projects, partners including Imperial College London, University College London, Digital Catapult, and BT worked together at the CLC, which also hosted meetings gathering project participants from across Europe. These efforts show the real value provided by EIT Digital's London CLC for collaboration, engagement, and inspiration – over the year utilisation of the CLC ran at 93%. 2016 saw UK 16 students enrolling onto the EIT Digital Masters School programme, and the London Node hosted 41 students from across Europe at the London "Digital Wellbeing Summer School" in August.

The London Node's end of year event "Scaleup Opportunities in FinTech – London and Beyond" attracted over 160 stakeholders from London's world-leading finance sector. The event also incorporated the finals of the Digital Finance category of the EIT Digital Challenge.   With participation by the Mayor of London's Office and EIT Digital partners IBM, Imperial College, and BT, the event showcased EIT Digital's role in driving world-class entrepreneurship and innovation.

Looking ahead, the Node is transitioning to a standalone legal entity which will help us broaden our efforts and secure additional sources of funding in support of long-term sustainability. We're also poised to move our CLC from its current home in White City, west London, to a new location in the revitalised King's Cross district. This puts us in the heart of London, at the centre of the digital ecosystem and close to our partners.

Dennis Moynihan
Node Director

Paris
Node

In 2016, the Paris Node enhanced its visibility taking advantage of its new Co-Location Centre (CLC) located in the heart of Paris, near the new Inria Paris research centre, UPMC University and Mines Telecom Institute. They all strengthened their "transfer to market" strategy, using EIT Digital as a core instrument to implement this.

Paris Node, composed of 26 partners (seven academic, three research centres, four clusters, four large industrial companies, four startups and three linked-partners coming from the clusters), is capitalising on the three main French innovation areas of the digital sector (Paris, Brittany and PACA regions).

New premises were inaugurated In Rennes, within the Digital Pole of the Rennes 1 University Campus, the brand-new flagship building for the incubation of digital research activities. The Sophia-Antipolis satellite, located inside the Techno Park, near Nice Sophia-Antipolis University and Eurecom Institute, became a major point of visibility, attracting Master School students and new partners.

2016 highlights

During the year, the Paris Node capitalised on the national ecosystem, tightening the links with the clusters, signed up two new partners and enhanced relations with French innovation acceleration instruments.

French startups have raised more than €6m in 2016 thanks to the Access to Finance service of the EIT Digital Accelerator

2016 saw the French partners particularly active across all four Action Lines with emphasis on Digital Cities and Digital Industry. Paris Node is gathering a critical group of key players on the "Operate European Digital Industry with Products and Services" High Impact Initiative, the digital transformation of industry being strategic in France.

The Paris Node secured €7.1m of EIT funding, backed-up by €14.5m from partners. Business-wise, we saw a strong increase with 20 start-ups in the EIT Digital Accelerator Innovation Funnel of which two have already signed the new term sheet, paving the way to the business' sustainability. Also, French startups have raised more than €6m in 2016 thanks to the Access to Finance service of the EIT Digital Accelerator.

In 2016, the Master School counted 53 students across the five French partner universities. We also welcomed 38 Doctoral School students, representing the largest cohort in EIT Digital. Two summer schools were organised in France, for Digital Cities and Digital Industry, gathering 80 participants from across Europe and beyond.

Three major events took place in France in 2016. At the end of October, in Rennes, the Master School kick-off gathered more than 400 students. In November, in Rennes, the Cyber Security Symposium welcomed over 200 delegates. And finally, the Paris Node Results Day took place on 29 November and included the finals of the Digital Cities category of the EIT Digital Challenge.

Stéphane Amarger
Node Director

Stockholm
Node

EIT Digital is present in Sweden through the Stockholm Node where the Co-Location Centre (CLC) is hosted in Kista Science City - a cluster of more than 1,000 ICT companies, known as the birthplace of several wireless communication technologies and called the Nordic Silicon Valley. Core partners Ericsson, KTH Royal Institute of Technology and RISE SICS are actively involved in activities and meetings, and in 2016 the Node welcomed Gleechi as a new industrial partner to EIT Digital.

The Swedish partner engagement in EIT Digital has this year also resulted in successful overall participation across the entire range of Innovation Activities and entrepreneurial education programmes. The Digital Infrastructure High Impact Initiative, "Advanced Connectivity Platform for Vertical Segments" (ACTIVE) kicked off in February 2016, and an extended CLC facility was inaugurated in the Electrum building to host the project members including the scaleup company Aifloo.

The Stockholm CLC continued to be an active meeting and working space. Some 300 workshops, meetings and external visits attracted over 6,000 participants altogether, and the usage of the working space was 90%. The space is very much appreciated by the increasing numbers of EIT Digital Master School students (136 in 2016). In addition, two Summer Schools were hosted in Stockholm on the topics of Future Cloud and IoT with 91 participants in total.

2016 highlights

The Stockholm team of the Business Accelerator handled 12% of the EIT Digital Accelerator's companies and Swedish scaleups were well represented at SEC2SV, (Start-up Europe comes to Silicon Valley). Co-hosted by EIT Digital the event provided access to market opportunities in the US for Evothings, Furhat Robotics, Gleechi, Lightflex Technologies and Shortcut Labs.

A number of events and dissemination activities in collaboration with partners grew brand awareness and ecosystem outreach to political, industrial, research and entrepreneurial communities as well as media. The European Commission representation in Sweden, the THINGS hardware IoT hub, the Automation Region, Tillväxtverket and Urban ICT arena are key players for future activities and collaborations.

In November, 130 graduates from the European universities that run the joint Masters programme of EIT Digital assembled in Stockholm for a day of inspirational lectures, formal graduation ceremony and festivities in the presence of EIT Digital CEO Willem Jonker, Chief Education Officer Anders Flodström, KTH President Sigbritt Karlsson and former EIT Governing board member Linnar Viik.

The end of year event hosted by the Node and the Digital Infrastructure Action Line took place in Stockholm in conjunction with the Internet Foundation in Sweden event "Internetdagarna". In four seminars with partners from Sweden, Finland, UK and Italy, topics on robust networks, security, structure and interoperability and the results from the European Trusted Cloud and Advanced Connectivity Platform for Vertical Segments High Impact Initiatives, all showed how Digital Infrastructure is driving Europe's digital transformation.

Göran Olofsson
Node Director

Trento
Node

EIT Digital is present in Italy through the Trento Node and its Milan satellite office. The Co-Location Centre (CLC) is located in Povo, on the outskirts of Trento. The satellite office is hosted by the CEFRIEL premises in the Milan Polytechnic campus.

Our core partners FBK, TIM and University of Trento and our affiliated partners including universities, innovation centres and industries are all very active in across our Action Lines although there is a stronger participation in Digital Infrastructure and Digital Industry. Their contribution to the activities leverages a strong connection with the territory and specifically with the Province of Trento which sees cooperation on local innovation projects and the availability of a receptive marketplace that doubles up as a "living lab" for experimentation.

2016 highlights

2016 saw active participation by the Italian partners in Innovation Activities. The Trento Node hosted and contributed to four High Impact Initiatives: Street Smart Retail and European Trusted Cloud Ecosystem in Trento, Advanced Connectivity Platform for Vertical Segments and Operating Digital Industry with Product and Services in Milan. The High Impact Initiatives which have been running for two years, such as Street Smart Retail (whose Activity Leader is based in Trento), are now delivering innovative products and services to the market – including 16 sales during 2016. There is also ongoing joint activity with Climate and Raw Materials KICs.

The commitment by the Italian partners was confirmed by the strong participation and industrial leadership with regards to the bid for future Innovation Activities, part of the Call for Proposals (2017).

2016 saw 49 students enrolling onto the EIT Digital Masters School programme in Italy and 28 into the Doctoral School. The Trento Node hosted 43 students from across Europe at the "Privacy Security and Trust Summer School" in Trento.

The Trento Node hosted and contributed to four High Impact Initiatives

During 2016 the Trento CLC and the Milan Satellite continued to attract EIT students, researchers, young entrepreneurs and, of course, the co-located companies and partners. The Trento CLC and the Milan Satellite had an average desk utilisation of 80% which increased to 100% capacity during peak times.

The appeal of the CLCs has been underlined by the significant attendance to the various events organised which attracted over 2,000 attendees. Another noteworthy success is the Speck&Tech initiative in Trento which clustered over 100 young entrepreneurs every couple of weeks, started and steered by our Alumni organisation.

A further confirmation of the attractiveness of EIT Digital in Italy came from the strong interest shown by innovative scaleup companies to access EIT Digital's Accelerator services.

Roberto Saracco
Node Director
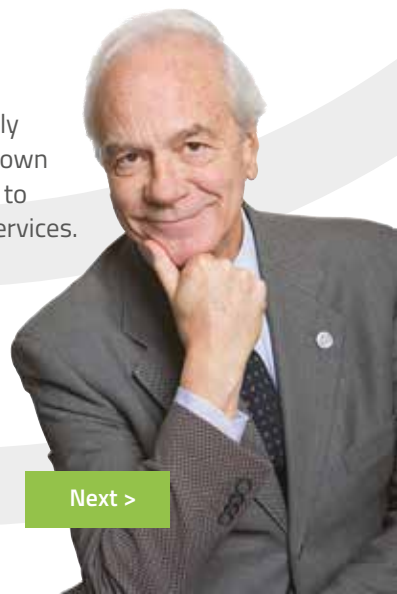
APG Budapest

EIT Digital in Hungary aims to boost the development of an innovative ICT ecosystem in Hungary and in Central and Eastern Europe (CEE), being the only EIT Digital Co-Location Centre (CLC) in the region.

2016 highlights

EIT Digital in Hungary had a very successful year which culminated in it becoming a full Node after five years of being an Associate Partner Group. In addition to this significant change, the consortium expanded by welcoming four new partners. EIT Digital's Hungarian presence was founded by two local higher education institutions, namely, Eötvös Loránd University (ELTE) and Budapest University of Technology and Economics (BME), and their industrial partners: Ericsson Hungary and Magyar Telekom, which are related partners of EIT Digital. Three new leading companies joined the fold in 2016: OTP, Evopro and E-Group, and an academic research institute: MTA SZTAKI. OTP Bank is the first bank ever to join EIT Digital's network. As a result of the 2017 Call for Proposals, Budapest will launch its first Innovation Project within the Digital Finance Innovation Area.

Over 100 events with more than 1,800 participants were organised or hosted by the Budapest Co-Location Centre (CLC) with the goal of increasing EIT Digital's visibility and brand awareness both in Budapest and in CEE. In the past five years, we hosted around 6,000 people at our events and meetings.

In June, EIT Digital in Hungary held an event called "The Digital Transformation of Industry and Finance" during which the processes of digital industry and digital finance were explained by leading players and policy makers shaping these domains in Hungary.

There was a total of 18 students enrolled in EIT Digital Master School programmes, and there were 31 PhD candidates enrolled in the Budapest Doctoral Training Centre. This marked a 47% increase compared to the previous year.

In April the management of EIT Digital Hungary received the International Development of Higher Education Award at the "Internationalisation in Higher Education" conference of The Tempus Public Foundation, for their work in implementing the EIT Digital education programme at ELTE. The foundation is a Hungarian non-profit organisation whose aim is to manage international cooperation programmes and special projects in the field of education, training and EU-related issues

EIT Digital in Hungary's plans for 2017 include establishing a new legal entity and the setting up of a new structure as a full Node. The education programme for innovation-oriented Masters and PhD students is to be continued, and the CLC's role of being a regional ICT Hotspot will be enforced. We will also focus on strengthening our network with Hungarian startups and incubators in Budapest and in the CEE region with the help of the ARISE Europe programme all with the aim of bringing the most promising ones into the EIT Digital network.

Over 100 events with more than 1,800 participants

Zoltán Horváth
Director

APG Madrid

Our Co-Location Centre (CLC) in the third largest city of the EU has a strong and wide capacity for leveraging the large potential of the Spanish ICT innovation ecosystem.

EIT Digital in Spain focuses its activities on the development of the ICT innovation ecosystem in all three dimensions of the innovation triangle and is supported by the CLC, which hosts a wide range of innovation, research, education, and entrepreneurship activities through its excellent facilities. It is located at the UPM's Science and Technology Park.

EIT Digital in Spain has also seen a great increase in activity and impact: doubling its business acceleration activity, consolidating its Access to Finance services, coaching six new companies, and fully deploying education activities both in Master and Doctoral programmes with students hosted at the CLC premises. Moreover, we hosted additional Business Accelerators, new scaleups, industrial matchmaking events, and tie-ups.

The Spanish partners already included the IMDEA Software Institute, the Technical University of Madrid (UPM), Telefonica, Indra, and Atos. During 2016, Ferrovial and Nokia-Spain also joined us; we are excited to have them on board since they are both key organisations in the Spanish ecosystem.

2016 highlights

During 2016, we consolidated the activity of the Master School Data Science major welcoming both first and second year students. We contacted and established collaboration agreements with more than 25 venture capital and investing bodies. Also, more than 50 potential startups applying to the coaching program were contacted, and almost 30 relevant actors in the field of digital transformation as well, including corporations, technology transfer agencies, and public administrations.

Regarding the usage of the CLC space, in 2016 it was over 80%, and three startups were hosted in our facilities.

EIT Digital in Spain also prioritised a Corporate Engagement initiative implementing a Cybersecurity matchmaking event with 15 coached startups and five large corporations (Telefonica, INDRA, ATOS, Ferrovial and Scytl).

On the institutional side, the Spanish public administration continued supporting the APG with grants in for 2016, and we cooperated with the other KIC Nodes in Spain, (Climate KIC, EIT Innoenergy and EIT Health).

Finally, we consolidated our role in ARISE activities covering Portugal with potential input of startups into the Business Accelerator coaching programme, with active cooperation with local accelerators and two scaleups brought into the coaching programme.

Manuel Hermenegildo
Director

Silicon Valley *Hub*

Silicon Valley is the undisputed champion of entrepreneurial innovation where ideas, people, technology, and private capital are transformed into new economic value. It is the research and innovation microcosm of the world, bringing together innovators from across the globe to tackle top economic and societal challenges.

2016 highlights

2016 marked our second year of fully running the whole portfolio of initiatives of the Silicon Valley Hub. The Hub has a significant role in implementing the global outreach ambition of EIT Digital by increasing the mobility of innovators and supporting joint initiatives in education, innovation and business acceleration between the USA and Europe.

At the ecosystem level, EIT Digital has taken a leading role in connecting Europe in the Silicon Valley (#EuropeSV) to encourage sharing and collaboration between the European nations, regions and cities who are present in the San Francisco Bay Area. We have enjoyed the strong support of consulates, trade and scientific missions, and accelerator programmes of different member states in the area.

For the second year running, the "main event" was the Startup Europe comes to Silicon Valley (SEC2SV), which included a one-day European Innovation Day at the Computer Museum in Mountain View, and a Scaleup Summit programme designed to support fast-growing European companies. Co-organised with Mind the Bridge, SEC2SV brought together EU policy makers, startups, European scaleups and corporations to meet Silicon Valley stakeholders. The goal was to make SEC2SV the premier programme enabling future

European scaleups to engage with the main US industry players for sales, funding and collaboration opportunities.

Our education activities provided local support for collaboration with US partners, Coursera and UC Berkeley. Our Innovation Activities focused on supporting emerging innovations from the Digital Cities action line, and on Trans-Atlantic Open Federated Testbed for Software Defined Networking (SDN) and Network Functionality Virtualisation (NFV). On the latter, we partnered strongly with the IEEE Software Defined Networks (IEEE SDN) programme. Our business development efforts have helped 15 startups in the EIT Digital Accelerator programme with their plans to access the US market or to get financing from the US.

Over the past three years, the Silicon Valley Hub has become an integral part of the evolving EIT Digital network. The goal for the next three years is for the Silicon Valley Hub to become a respected local actor with strong engagement of US-based partners and to have contributed positively to the overall sustainability of EIT Digital.

Marko Turpeinen
Silicon Valley
Hub Director

ARISE

To extend the benefits of its ecosystem to the countries where it is not present through one of its nodes, in 2015 EIT Digital launched ARISE Europe, a program focused on stimulating regional growth by connecting local innovation ecosystems to EIT Digital's core functions – the Accelerator, the Master School and the Summer Schools.

ARISE Europe establishes cooperation agreements with the most active of the local innovation centres (accelerators, regional clusters, incubators), addresses universities, engages the best talents and involves government agencies. Together with its current six innovation centers in six different countries, in 2016 ARISE Europe targeted three major objectives: connecting the best scaleups of the local ecosystems to the EIT Digital Accelerator, to support their growth ambitions; helping innovation centers to strengthen their own network by mobilising local stakeholders; and increasing EIT Digital's footprint. Through joint activities with local universities, ARISE Europe aimed to attract the best talents to EIT Digital's Entrepreneurial Education programme.

As a result, in 2016 ARISE Europe scouted more than 150 scaleups, introducing 21 of them to the EIT Digital Accelerator; it organised 22 co-branded events with the innovation centers

that engaged more than 140 founders, 43 government representatives and more than 900 other stakeholders; helped to expand the innovation centers', and its own, networks to nearby countries, reaching out to most of the Balkan and the Baltic states; increased the number of applicants to the Master School and the Summer Schools, with 15 students from the targeted countries enrolled in the former and 34 in the latter.

All those activities and results considerably contributed to increasing the reputation of EIT Digital as a trustworthy organisation in the targeted countries. That trust is now starting to pay dividends, as EIT Digital is becoming more and more attractive for national and regional governmental agencies. In this regard, in 2016 we were invited by the Estonian Ministry of Economic Affairs and Communications to join in their successful bid for the organisation of Startup Nations Summit 2017, together with Startup Estonia and the European Commission.

In 2016 ARISE Europe scouted more than 150 scale-ups and organised 22 co-branded events

Fabio Pianesi
Research Director

Entrepreneurial
Education

"As time goes by". It may sound trivial and but it's pretty apt. In 2016, after our third cohort of students had graduated, EIT Digital renewed the Master School agreements with its 20 partner universities. EIT and EIT Digital were created when engineering education was facing its biggest challenge - the transition from vocational to science and innovation-based engineering education.

The driving force for the new challenge was a global move towards innovation-based economies and societies. Innovation now stands behind two-thirds of global economic growth.

Digitalisation and methods for how to learn transversal ("higher order") skills such as creativity, entrepreneurship, value judging and leadership, together with internet-based delivery of education, all created and creates a dynamic landscape to educate for and in.

The EIT Digital Master, Doctoral and Professional Schools address all these issues. In addition, EIT Digital is a leader in developing online education in formats such as MOOCs and blended virtual and face to face courses. EIT Digital, guided by its knowledge triangle (Education, Research and Business) also applies new, student-centred, learning by offering modules that make students fit for innovation and entrepreneurial work in industry.

The critical asset for all EIT Digital Schools is access to motivated and talented students. It is clear that international students make their choice where to study based on access to scholarships, hence the importance of making their capital investment in education as low as possible while maximising the impact of their intellectual and economic investments through the brand of EIT Digital and the Partner Universities.

It is clear that EIT Digital has created an entrepreneurial brand that we profit from. We can further develop this through more integration with, and use of, Innovation Activities. Two new initiatives in 2016 are especially promising; the post Master and Industrial Doctorate programmes in which we extend the education value chain to concrete industrial use of gained skills and knowledge.

The brand has been further strengthened and globalised by the success of the EIT Digital Micro-masters: Internet of Things and Data Science with 30,000 thousand active learners. A Micro-master is essentially a one-semester master-level education that is free standing and also serves as the 1st semester for the Campus programmes.

Europe's capacity and capability to drive digital transformation enabling new business and work models in industry, healthcare and society is an existential issue. Whereas the further education of European professionals, helping them to understand digitalisation and its transformative power is probably the main enabler for success.

The EIT Digital Professional School now offers a portfolio of 20 online learning modules complemented with face to face sessions for

networking, coaching and advising professionals how to work with digitalisation and digital transformation. We envisage that this will be needed for a range of areas from software production to executive decision-making at the highest level.

EIT Digital Micro-masters: Internet of Things and Data Science with 30,000 thousand active learners

Master School

Patrick Hartigan
Head of Master School

The EIT Digital Master School offers two-year European Masters programmes in computer science and information technology, with a focus on Innovation and Entrepreneurship (I&E). This outstanding and unique technological education is delivered by 20 leading university partners of EIT Digital, backed by industry and research partners from across Europe.

Students can choose the Masters programme that best suits their career aspirations and intellectual interests. EIT Digital offers eight programmes from the most innovative and industrially-relevant fields of ICT. These programmes are: Cloud Computing and Services (CCS), Data Science (DSC), Embedded Systems (ES), Digital Media Technology (DMT), Human Computer Interaction and Design (HCID), Internet Technology and Architecture (ITA), Security and Privacy (S&P) and Software and Service Architectures (SSA).

During the two-year programme, students study at two different universities in different countries leading to a double degree and an EIT-labeled Certificate.

They complete a work placement as well as a two-week summer school programme. They access and benefit from EIT Digital's ecosystem of entrepreneurs, companies, students and alumni across the whole of Europe.

The Master School seeks out the best students from across the EU and beyond. It then equips them with cutting-edge technical knowledge and business skills so that they can go on to help assure Europe's role in the global digital transformation. This is a unique approach where learning to think as an entrepreneur is a key criterion and a central theme of their education. The I&E content is delivered in four modules (I&E Basics, Business Development Lab, Summer School and Thesis), which are interwoven with, and inherently relevant to, the students' technological specialisations.

20 leading university partners of EIT Digital, backed by industry and research partners from across Europe.

Since the launch of the programme in 2012, over 1,000 students have joined the growing generation of Europe's digital pioneers. There are currently just under 600 registered students (up from 90 in 2012 and 290 in 2015), and we are expecting an additional 425 admissions in 2017.

The students come from over 50 countries, and 48% of the 2016 intake are EU citizens (up from 35% in 2015). 25% of them are female (similar to the 2015 figure).

All students are obliged to attend a Summer School, which deliver I&E education based upon the real business challenges of our industrial partners and startups, aligned to EIT Digital's Action Lines. In 2016, nine summer schools were held in Eindhoven, Helsinki, Karlsruhe, London, Paris(x2), Stockholm(x2) and Trento.

A two and a half day Master School kick-off event was held in Rennes in October and was attended by 325 students. The new

... over 1,000 students have joined the growing generation of Europe's digital pioneers.

student cohort was immersed straight away in a business challenge to kick-start their I&E education with a very hands-on approach.

In late November, 135 students attended a graduation ceremony held in Stockholm. If they follow the trend set by their predecessors, 100% of them will be either employed or continuing their education (76% will have jobs; 24% will have entered PhD programmes), 89% of them will have remained in Europe with 98% of those employed in the technology sector.
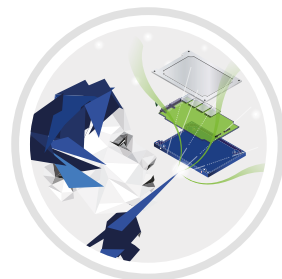
Master School Course Programmes

Cloud Computing and Services

Data Science

Digital Media Technology

Embedded Systems

Human Computer Interaction

Internet Technology

Security and Privacy

Software and Service Architectures

Master School

Case Study

Karens Grigorjancs

Karens Grigorjancs, an EIT Digital Master School graduate, is one of the co-founders of Plugify - a booking platform for the entertainment industry. He followed the Cloud Computing and Services programme spending his first year at Delft University of Technology and his second year at Aalto University, graduating in 2015. Artists, including singers, DJs, bands, guitar players or other music artists can create a booking profile which can be used directly by pub owners, wedding planners, event managers or individuals. The booking commissions are far lower than traditional booking agency charges. That's why Grigorjancs has said Plugify is to

booking agencies for live music, what Uber is for the taxi world.

In 2016, Plugify raised nearly €750,000 from 420 funders on oneplanetcrowd.com, a European crowdfunding platform, in just a month. The figure is far more than the founders had dreamed of; their initial aim was €200,000 - the campaign ended up exceeding this funding goal by over three-fold.

Master School

Case Study

Nils Rodday

Nils Rodday graduated from the EIT Digital Master School in July 2015, having studied Security and Privacy first at the University of Trento, and completing his exit year in the Netherlands (University of Twente).

He caused a stir with his Masters thesis 'Exploring security vulnerabilities of unmanned aerial vehicles' and is now seen as a worldwide expert on the matter.

In his thesis, Rodday discovered security issues with a professional drone, the kind that big companies, police forces, or fire departments use. He succeeded in taking over the steering of the drone of one manufacturer who lent him one for his research and let it fly as he commanded. The issues he discovered also apply to other unmanned aerial vehicles as many manufacturers are using similar technologies. Besides detecting the security problems, he also has made several suggestions to improve commercial drones and has spoken on the issue at conferences worldwide.

Rodday now works as a security consultant at IBM in Germany.

Summer Schools

The Summer Schools are a focal point for Education-Reseach-Business integration and an opportunity for Master School students to experience hands-on Innovation and Entrepreneurship education. Students are immersed in real business cases, which are closely aligned with the Action Lines.

All Master School students are required to attend a Summer School during the vacation period between their entry and exit years. In 2016, there was also a concerted effort to attract external attendees to the Summer School, including employees seconded from industry and research centres, including EIT Digital partner organisations.

Each of the nine Summer Schools was held over a two-week period. Lectures and presentations from entrepreneurs and industrial product development specialists, as well as site visits, complemented the work on business development. Each Summer School was themed around a particular area of technological transformation, including Digital Wellbeing, Security and Privacy, Cloud Computing, Smart Spaces, Future Networking, Smart Energy Systems, Cyber-Physical Systems and Urban Mobility. The cities hosting the Summer Schools were Eindhoven, Helsinki, Karlsruhe, London, Paris, Stockholm and Trento.

In addition to the 288 Master School students, there were 90 external students, including industry secondees, PhD students and a number of undergraduates who were considering the Master School for their future career options. There were 35 such attendees from ARISE countries.

Attendee satisfaction was high with students awarding an average score of 4.1 (ex 5) in their exit surveys. The highest score was 4.7 and the lowest 3.0. Students' comments included the following from an industry secondee: "Normally I work for big corporations; here I could step into the shoes of an entrepreneur. Now I have the lessons and connections that helped me to define myself in this field. It has changed my mind and pushed me to challenge myself." Further evolution in the Summer School programme and an even stronger alignment with the Action Lines is anticipated for 2017.

Summer School
Case Study

Summer School
Case Study

Nilofer Christensen is product manager for mobile navigation app at TomTom, one of EIT Digital's industrial partners, who went to the Digital Wellbeing Summer School in Eindhoven.

"Students have a fresh way of looking at things. For them, the sky is the limit. They don't hold back their thinking yet. In professional life, you forget this way of thinking; you hold back to fit in a company culture. A great side-effect of the Summer School was that I found new interns for my company. These students have a technical background and the business skills we are looking for."

Göksel Tolan (26) started as an EIT Digital Master School student at the University of Trento and will complete the course at the Technical University in Eindhoven.

"In a short time, I got to experience business in simulations of the real world. It was very challenging. We had to challenge time, culture and different educational backgrounds. What I learned most in the Summer School Wellbeing, is how to use technology for the future. It opened my mind. After my Master degree, I want to start my own business and use the power of technology for a better life!"

Doctoral School

Maurizio Gabbrielli
Head of Doctoral School

Europe needs to educate PhDs with not only excellent in-depth knowledge in their field but also the capability to transform ideas into products and services – turning them from students and researchers into innovators and entrepreneurs.

The EIT Digital Doctoral School (DSL) offers a programme where doctoral candidates acquire a mindset for Innovation and Entrepreneurship (I&E). After graduation, the PhDs are experts/leaders who understand current and future challenges as well as the opportunities new technologies present to industry and society. All Doctoral candidates belong to a Doctoral Training Centre (DTC) that provides a multi-disciplinary environment aligning with the Action Lines of EIT Digital – Digital Cities, Digital Industry, Digital Infrastructure and Digital Wellbeing.

An Action Line-aligned PhD thesis topic, and integrated Business Development Experience (BDE) assure that PhD candidates attain scientific, innovation and entrepreneurial excellence.

Each DTC is co-located with an EIT Digital CLC and led by the DSL. The DTCs draw upon the CLC university and business partners' expertise. The DTC ensures excellent university partner thesis supervision and business partner mentoring of each PhD candidate. The DSL and DTC management implement appropriate, high-quality I&E education and work pro-actively to promote cross-geographical and organisational partner mobility.

The DTCs are located at CLCs in Budapest, Helsinki, Madrid, Paris, Rennes, Sophia Antipolis and Trento, and academic supervisors and industrial advisors come from CLC innovation eco-system partners.

Launch of Industrial Doctorate

The "Industrial Doctorate" initiative was launched in 2016 where doctoral candidates work under academic supervision on thesis topics from industrial front-line development. Integrated thesis work enables the doctoral students to become very good scientists and entrepreneurial innovators.

Throughout the year, the first eight industrial PhDs were admitted with both major companies and SMEs as industrial partners. 44 Master students applied to the DSL and 30 of them were admitted. In total, the Doctoral School increased its number of PhDs to a net number of 133 in 2016, including 16 PhDs who graduated with an EIT-labelled doctoral degree, after finalising six months industrial "post-doc" or BDE.

In 2017, EIT Digital expects that the Industrial Doctorate initiative will increase and foresees a recruitment of an additional 40 students and a graduation of 20 PhD candidates per year in the coming two years. To achieve the DSL KPI of more than 200 PhD candidates in the DSL, work on creating two new DTCs is in progress. The EIT Digital local ecosystems in Eindhoven, Stockholm and Berlin should benefit from DTCs and the contributions from strong academic and industrial partners.

Doctoral School

Case Study

Wilfried Dron

Wilfried Dron was in one of the first PhD intakes of this European education programme and wrote a thesis centred on 'lifetime estimation of connected devices'. By December 2014 he had found a possible answer to a problem that had dogged the sector for some time: 'how to develop devices with prior knowledge of how long they will last on a single battery charge?'

During the Innovation and Entrepreneurship program (I&E) of the EIT Digital Doctoral School, he mastered the business skills to take his idea forward. "In these six months, I discovered that my project would indeed fill a gap in the market. I can allow companies to grow by estimating how the battery will impact on the design."

While still writing his thesis, he applied for a patent in 2015 and graduated shortly after. He then, during 2016, worked alongside Swedish laboratory, SICS and Spanish ATOS in an EIT Digital Innovation Activity, on software that could predict product shut-down and battery ageing.

Dron launched his own startup Wisebatt in September 2016. With the help of EIT Digital, he gathered a team of seven people to join his business whose target customers are those developing battery-operated ICT devices.

Professional School

Frank Gielen
Head of Professional School

New digital and key enabling technologies will increase productivity and customer value which in turn will generate new market opportunities and foster new disruptive business models. Enterprises of all sizes and in all sectors require the availability of new digital skills at all levels, including at the leadership level.

A digital workforce with new knowledge and skills must be educated. But the demand in terms of quality or quantity, cannot be met by existing education and training institutions. New education initiatives for professionals in the workforce and new vocational and academic education programmes for future professionals are needed.

IT professionals' jobs are reflected in existing occupational categories and statistics. But in order to guide policy development, there is a need for clearer definitions concerning IT professionals. An estimate shows that there will be a shortfall of 750,000 digital professionals and 200,000 high- tech leaders in Europe by 2020.

The EIT Digital Professional School was launched to meet this need. In cooperation with industrial partners; universities, institutes and companies, a course portfolio was developed that met the requirement to inform new digital professional roles, based on the latest digital developments, and to teach the basics of digital transformation and related business models in public and private enterprises.

In 2016, 20 courses were created and piloted in blended and MOOC online formats, producing over 650 graduates.

The MOOC format of the Internet of Things studies alone attracted almost 4,500 learners who actively followed the course.

Revenues for EIT Digital have been limited to certificate fees paid by MOOC graduates, and the courses themselves have mainly concerned new professional roles. However, while the demand for the new blended online format has been lower than anticipated, it remains to be seen if this is just a marketing issue as during 2017 we will have full European marketing for these courses.

One should be aware that the digitalisation of industrial and societal sectors will result in fewer "normal" jobs and an increase in digital jobs created by both new digital technologies and digital business models. It is important for Europe to consider the digital transformation from a holistic perspective both in terms of the labour market and education. The EU initiative on "Innovation and Jobs" is welcome and we would suggest its obvious conclusion would support our view of "No Education - No Innovation".

Digital transformation from a holistic perspective

Blended Learning

EIT Digital offers blended courses to combine the best of two worlds: online and face-to-face education. Blended education has been set up as the basis for innovation in learning for the Master, Doctoral, and Professional Schools. Online Education exploits the possibilities of crossing boundaries and eliminating limitations of time and place. This is in line with the EU ambition to support Education and Training in Europe and beyond. All programmes online, on campus and blended contain Innovation and Entrepreneurship (I&E) courses.

2016 highlights

The online content was provided to all the students of the Master School in the form of the online starter kits for the Master School kick-off and the Summer Schools. Similarly, many Doctoral and Professional School learners have joined blended courses.

Additionally, in cooperation with Coursera, an online programme in Embedded Systems has been developed. In 2016 EIT Digital launched or ran 17 Massive Open Online Courses (MOOCs) on the Coursera platform. The last three MOOCs in this series will be launched in the first quarter of 2017. The 20 MOOCs with over 250 web lectures together form a 30 ECTS online programme in Internet of Things through Embedded Systems, which is the equivalent of one semester of the on-campus course. These MOOCs are also used on-campus in a flipped classroom setting; students follow the Coursera web lectures at home and discuss the assignments in class.

Learners on Coursera can choose to take one or more MOOCs separately or follow the complete online programme. Upon completion of a MOOC, and successfully finishing the online questionnaire, learners receive a Coursera certificate. In 2017 students will also get a programme certificate upon completion of the entire online programme in Embedded Systems on Coursera. A completed online programme provides students access to the selection and admission process for the second semester of the on-campus EIT Digital Master School programme. Also in 2016, we started the preparations to launch a new online Data Science programme on Coursera as well.

The blended Master Programmes in Embedded Systems and Data Science provide a unique opportunity to market the Embedded Systems and the Data Science Master Programme and to recruit students for the Master School in general. Also, the courses in these programmes generate massive evaluation data and form the basis for improving both blended and on-campus education.

Numbers

In 2016 a total of 27,000 unique learners of the 24m registered learners at Coursera followed one or more EIT Digital MOOCs on Coursera with the majority of the learners coming from Europe, the United States, and India. On average, the EIT Digital courses are rated 4.2 on a 5-star scale. We are expecting a significant increase in the number of unique online learners in 2017 to around 100,000.

Partners in the Blended Master Programme include the Eindhoven University of Technology (Netherlands), KTH, Sweden, University of Turku (Finland), Åbo Academy University (Finland), Technical University of Berlin (Germany), iMEC (Belgium), and the University of Twente (Netherlands). For the first time, EIT Digital also collaborated with Haas School of Business, part of the University of California Berkeley in the United States.

Gilles Betis
Action Line Leader

Digital Cities

Our Digital Cities Action Line is now more than ever driving digital transformation in smart cities. Undeniably, digitalisation enables the improvement of cities' performance as well as citizens' quality of life, respectively through data analytics and new ground-breaking applications. In Europe, EIT Digital is at the forefront of this urbanising world's digital revolution, supporting Innovation Activities and the boldest startups.

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

A multidisciplinary approach including service design, urbanism, social sciences is used to provide an accurate understanding of the concrete problems cities are facing, and to provide the means to overcome them, in particular by developing sustainable business models.

Mature technologies will be used to allow a quick deployment in the market for new services addressing the problems identified by cities regarding these challenges. They will provide clear differentiators and allow iterative improvement of user experience.

Mobility, information and safety are the key areas that are affected.

By 2050, the global urban population will grow by 75% to 6.3 billion

Smart urban mobility

The demographic, geographical and financial limitations of deploying efficient and cost-effective public transport will drive the emergence of solutions for clean, quiet, stress-less and cost-effective mobility. Mobility as a service integrates public, private, peer-to-peer, conventional, de-carbonised or autonomous transport means in seamless door-to-door mobility services. It will benefit from the increasing openness of citizens to participate in a sharing economy and developments in autonomous transport. Alternatives to physical mobility may be offered, e.g. with proximity hyper-connected working spaces. Augmented and virtual reality will provide city planners and tourists in-situ with valuable added information about the past and potential future of city sights.

Big data analytics

Developments around Big Data will have a special significance for cities and citizens. Besides their potential role of open data operators, cities need to develop a new role in organising the urban information framework and creating a new informative ecosystem. Big Data analytics and artificial intelligence, acting on data created by IoT sensors and open data, will result in the emergence of new business actors. Examples include semantic data browsing, data brokerage and trusted services between data providers and customers. Hyper-local services and local Internet networks will develop proximity relations between citizens, city governance, local associations, and retail networks.

Resilient cities

Also, a key factor for the attractiveness of a city is the safety of its citizens and visitors. The safety of a city and resilience to unplanned natural events (e.g. heavy weather) or man-made events (e.g. terrorist attacks) need to be improved at many different stages: analysing threats and risk occurrence, designing mitigation strategies, training and prediction of potentially hazardous situations. The traditional centralised systems need to be enhanced with citizen participation and collaboration, event recording and data for post-event analysis and future improvement of processes.

Digital Cities

Innovation Activity

The aim of EIT Digital's Digital Cities Innovation Activities is to improve the lives of everyday citizens in urban environments through increased digitalisation.

3cixty

3cixty signed its first two "Smart Cities" contracts with the Regional Tourism Commission of Côte d'Azur and the town of Saint Martin Vésubie, in southern France.

3cixty gathers and collates impressive amounts of data and makes it accessible at a glance allowing visitors to optimise their city sightseeing. The app is now being commercialised by EIT Digital partner Data-Moove.

How does 3cixty work? The 3cixty platform is able to collect data from various web-based sources including public databases (e.g., open data portals) and non-public data (e.g., data warehouses) within a selected geographical area. Once targeted, the data is then collected, filtered and cleaned and then stored in a knowledge base that presents the content in graphic form.

The web application can also be integrated into existing websites allowing city tourism offices to disseminate and promote information for tourists and residents alike. Its ergonomic navigation interface allows users to easily find all of a city or region's POIs (points of interest), events, shops, bars and restaurants from a vast information base. It also uses criteria filters such as interest and proximity, taking into account transport options, weather, and reviews. Tourists can then save items in a wish list which is sharable on social networks and even design bespoke tours using the app's automatic suggestions of logical routes.

Digital Cities

Innovation Activity

Ambiciti

The first mobile app for air and noise pollution at street resolution launched in Europe and recently in the United States.

Ambiciti, the revolutionary mobile application for air and noise pollution analysis, measures levels of air and noise pollution street by street and offers the healthiest route for urban citizens to move and live in their cities.

Supported as part of EIT Digital's Digital Cities Innovation Activities, the French startup Ambiciti has developed its application together with the French National Institute for Computer

Science and Applied Mathematics (Inria), two other SMEs - NUMTECH and TheCivicEngine - and as part of Inria@SiliconValley and the Inria Project Lab CityLab.

The Ambiciti mobile application informs about individual and collective exposure to noise and air pollution. It measures the ambient noise by using smart phone microphones (while respecting users' privacy, as it only sends the noise intensity measurements to the system, but not the sound captured by the microphone). The application follows users' exposure during the day and allows them to map their neighbourhood, possibly in collaboration with other Ambiciti users. Ambiciti is the first application to truly provide information on air quality levels hourly and for the days to come. Officially launched in Paris for Car-Free Day on September 25, 2016, Ambiciti is the first application to provide air quality at street level and is already available in other cities in Europe and San Francisco, CA.

Digital Cities

Scaleup Case Study

NAVYA

France's third largest city, Lyon, is piloting the first public transport service made possible by an electric, driverless and 100% autonomous vehicle with NAVYA.

NAVYA develops driverless shuttles to optimise the transportation of personnel, visitors or service agents, in private or public sites (airports, hospitals, industrial sites, amusement parks, urban areas, etc.). In Lyon, the shuttle is named NAVLY and its path is 1,300 meters long and composed of five stops. The path is free of road lights, crosswalks and intersections.

Also, NAVYA has established itself as a specialist in the field, renowned for using complex technologies combining software expertise, automobile construction and advanced techniques in navigation, geolocation and telecommunication. In June, RATP Group, a public transportation operator in Paris, already announced that it would purchase a NAVYA autonomous bus for a trial in the capital.

By joining the EIT Digital Accelerator in 2015, NAVYA has been assisted by EIT Digital to get traction from its European business ecosystem by introducing it to investors in the UK and Finland.

In October 2016, NAVYA set a very impressive milestone as their shareholders unanimously agreed to a €30m increase in capital. French groups Valeo and Keous as well as

Qatari company Group8 took an equity stake alongside the original shareholders, Gravitation, Cap Décisif Management and Robolution Capital, the original shareholder. Robolution Capital, managed by 360 Capital Partners, retained control of the company.

Digital Cities

Scaleup Case Studies

Distribusion

Distribusion makes booking an intercity bus ticket as easy as booking a flight. Recent achievements include collaboration with EIT Digital partner Amadeus, a successful €6m funding round, and recognition at the prestigious NOAH start-up competition.

In 2012, Julian Hauck and Johannes Thunert launched Distribusion. Since then, it has brought more than 100 intercity bus operators on board throughout 25 European and Asian countries. It now provides 2m bookable rides to online resellers with more than 10m unique visitors per month and to 4,000 travel agencies worldwide. This makes the company the largest distribution platform for intercity bus rides, in an estimated global market of €72bn.

In 2016, Distribusion and EIT Digital partner Amadeus announced a ground-breaking collaboration to facilitate access to intercity bus ticket bookings for travel agencies in German markets.

Distribusion raised €6m in funding with the support of EIT Digital. The funding enables the company to expand their team and roll out their business on a global scale. Moreover, Distribusion is one of 50 selected scaleups that were brought together at the NOAH conference in Berlin.

KAROS

Launched in July 2016, this smart car-pooling application turned multimodal in the Paris region by connecting to the STIF (Paris Region Transport Union) rail network.

Karos leverages machine learning and big data technologies to transform empty car seats into brand new transport networks. By integrating a predictive multimodal routes algorithm to its application, Karos offers the possibility to combine car-pooling and traditional public transport. The application embeds the public transport plans of Ile-de-France to offer trips combining car-pooling, subway, tram and Paris regional trains. Soon to be extended to the whole French territory, this new feature now enables users to access fastest routes to get to their destination.

Thanks to the multimodality, Karos solves the main problem of daily commuting: the first and last kilometres make the majority of French commuters give up public transport to go to work.

Karos won the first prize in the Urban Life and Mobility category of the EIT Digital Challenge in 2015. EIT Digital showcased Karos at events such as Innovative City and Viva Technology to increase its visibility among potential new customers.

Petri Liuha
Action Line Leader

Digital Industry

The Digital Industry Action Line covers the seamless process from production to retail and the related supporting functions such as logistics and consumer engagement. The mission of the Action Line is to improve efficiency in production and retail, to better address customer needs and to help save natural resources in manufacturing and logistics. Two EIT Digital High Impact Initiatives (HII) were hosted in the Digital Industry Action Line.

Specific focus areas of Digital Industry are the predictive maintenance of production systems, factories of the future with decentralised manufacturing and new shopping experiences where in-store and online experiences can be merged into one. The data from the different parts of the value chain is the main enabler of new innovations that can serve consumers or help to organise production.

E-commerce and consumer access to information and Big Data are changing how the retail and manufacturing industries operate. The impacts are fundamental and probably very disruptive to many players in the current value chains. The data can be quickly aggregated and analysed, carrying an increasing share of the value of the whole business domain. In addition, large amounts of data and knowledge can also now be traded and shared. It also enables mass customisation and distributed production.

The portfolio of 17 activities in 2016 included new solutions for production systems, retail and critical infrastructure, but also smart energy systems. One High Impact Initiative – Smart Retail was concluded and a new HII, called OEDIPUS, focusing on Industry 4.0, had an early bird start in 2016.

2016 Highlights

The following impressive results were reached in 2016: 46 new improved products, services or processes were launched on the market, four startups were created, 26 knowledge transfers, 31 business ideas or innovations incubated, 42 Knowledge adoptions.

Three Summer Schools with 40 students each were organised; Smart Spaces Summer School in Helsinki, Cyber-physical Systems Summer school in Paris and Smart Energy Systems Summer School in Karlsruhe.

As the main dissemination event of the year, the Digital Industry Action Line showcased results and scaleups at "Digital Industry of Tomorrow", organised in Helsinki on 30 November. The audience consisted of "digital decision makers", business experts and entrepreneurs from manufacturing, logistics and retail industries as well as sales personnel and researchers from the field.

The event also hosted the finals of the Digital Industry category of the EIT Digital Challenge. The winner was Spanish company Exipple studio with their artificial intelligence platform for retail digital signage called Gestoos.

Four new startups created

Data Frame (activity: CPS Integrated Information Engineering) provides tailored integration solutions based on open standards to develop software-intensive products for industrial Cyber-Physical Systems. The key benefits are the removal of key integration barriers, and the reduction of software development costs without lock-ins for suppliers.

Fuuvr (activity: HII Street Smart Retail) created a virtual reality based marketing product. Its business model is to license the software platform and content to companies on a subscription basis.

Seita (activity: Electric Vehicle Aggregator Service) provides IT-based demand-response solution to energy retailers and operators. The solutions bring risk hedging offers and a portfolio of digital consulting services to improve the flexibility of electric vehicle charging deployment.

Wisebatt (activity: CPS for Lifetime Awareness) provides an application for embedded battery-powered devices to estimate their remaining lifetime accurately. The product addresses design offices, OEMs in IoT Objects, mobile and medical applications.

Digital Industry
High Impact Initiative

Street Smart Retail has developed Digital Retail Suite (DRS), which aims to support the competitive advantage of Small and Medium Enterprises (SMEs) in the new retail landscape. It enables shop owners to collect and analyse omni-channel real-time data of customers, and tailor powerful in-store shopper experiences, in order to increase sales, conversion rates and retention rates.

DRS is a cloud-based solution that integrates consumer behaviour analytics, profiling and customer preferences in-store. It enables real-time profiling of customers and leverage on discounting strategies, in order to tailor experiences for individual customers.

The solution supports sales - shop owners can measure the performance of sales assistants, as well as compare the performance of their companies with competitors. The main indicators DRS offers are sales growth (5%), conversion rate growth (10%) and retention rate growth (10%).

DRS focuses on helping shop owners to keep physical stores competitive with e-commerce giants. Our value proposition addresses showrooming, which represents a huge challenge because 32% of worldwide consumers buy elsewhere on-line after in-store visits.

Specifically, during 2016, British Telecom in partnership with Politecnico di Milano, introduced engaging and personalised experiences for customer shopping at temporary pop-up stores. The smart Pop-up Store solution allows retailers to deliver a seamless omni-channel shopping experience while developing a deeper knowledge of their customers and implementing an enriched CRM strategy - wherever the point of sale is. It allows retailers to create a shopping experience in their temporary stores that is consistent with the other physical and digital outlets. It includes real-time collection and analysis of data related to shopping preferences and behaviour and supports robust sales and operational excellence.

The service includes modular solutions, leverages all potential points of contact (screens, smartphones, sales assistants) and a multi-service mobile app, and supports a multi-sensory customer experience (scent diffusion, in-store radio, digital signage). The Pop-up Store has already been piloted by several customers in Italy operating both in the fashion and in the retail sector.

SMARTRETAIL
bridging electronic and physical commerce

On another track, Olivetti launched a new service that is promising to transform the management of customer relations and loyalty plans for smaller retailers. The affordable, digital retail solution WCards gives small shops a competitive edge over e-commerce, online giants. WCards uses a "Proximity Marketing function" that can be used to send customer sales promotions and product information when they are in front of or inside a shop, or when standing near to a specific product.

Feedback from the system can also be used to analyse the customer experience of the shop space itself and the areas or products attracting most interest can be identified. In addition to offering a service, WCards is built on the concept of creating a real user community, making product promotions easier, increasing the numbers of customers reached and encouraging customer loyalty.

Partners

EIT Digital partners that work on Digital Industry activities include: Aalto University, British Telecom Italia, DFKI, Deutsche Telecom Group, Olivetti, Motionlogic FBK, Nokia Technologies, Politecnico di Milano, Reply Group, Technical University of Berlin, TIM Group, Spaceify, Selitera, ThinkInsite, Smartlife, Mfabrik, University of Helsinki, and VTT.

Digital Industry

Innovation Activity

In production systems, Industry 4.0 Powering Europe activity designed, developed, tested and validated two industry 4.0 demonstrators in the field of production monitoring and control. The two solutions answer the real industrial need of two customers: OCE (Smart productivity dashboard for industrial printers) and CRF/FCA (monitoring solution for logistics in assembly line with the involvement of collaborative robots), enabling fast reaction, reduction of production stops, supporting decision making and enabling historic trend analysis.

In retail, the Brick and Mortar Cookies Activity used HD smart cameras in a combined solution for Security and Business Intelligence. The aim was to allow relevant and precise analysis of customers' behaviours and purchases in brick and mortar stores. The retailers can use the data analysis in their omnichannel strategy. The product was brought to market by Neosensys. It is the first Heterogeneous Business Intelligence solution for retail. The impact of the activity is mainly in allowing physical stores to remain competitive in the face of increased competition from on-line shopping. This is key to keeping existing jobs and creating the need for more jobs. In addition, strengthening city centre economies will be beneficial for wider society. In 2016, two retailers involved in the Activity signed contracts for a trial (beta-deployment).

The Micro Energy Information System Platform Activity created an internet-enabled smart energy access platform which allows users in off-grid locations to operate, monitor and pay micro-financed solar home systems via mobile.

The need for the solution is apparent in developing countries where conventional electrification approaches do not work. The outcome was a prototype and validation of the "Micro energy information system platform" and the creation of spinoff company Micro Energy International GmbH and associated company ME SolShare in Bangladesh. The platform is a smart charge controller for solar home systems that can be integrated with existing installations. Due to its innovative features and web-connectivity, it has the potential to become a game-changer in the micro finance market and energy trading value creation chain. Its adoption can result in the reduction of climate-damaging emissions by substituting conventional energy sources like coal, fossil fuels etc. In September 2016, ME SolShare received the United Nations Momentum for Change Award for the "Peer-to-Peer Smart Village Grids". The product will be launched to market in 2017.

Digital Industry

Innovation Activity
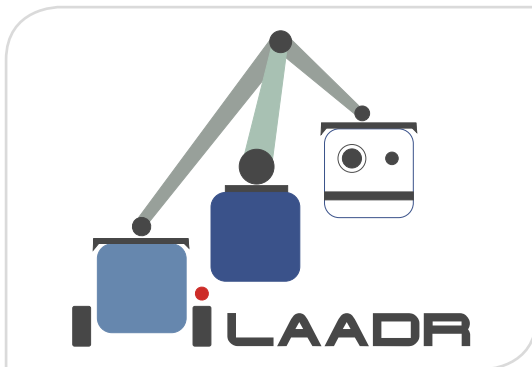
Internal Logistics with Automated Autonomous Delivery and Replenishment (iLAADR)

The Activity created the iLAADR platform for managing internal logistics flows in warehouses. The solution uses a fleet of mobile robots coordinated to pick up and deliver components from one point to another. iLAADR mobile robots prepare and deliver kits from the warehouse to the lineside on the factory floor. One installation of ILAADR with a robotic arm – called Mobypick - composes kits and a simpler one delivers the kits to the lineside. The specific challenges come from the requirement to handle many kinds of components. For this purpose, a versatile gripper for component handling was implemented.

iLAADR eliminates non-value added activities, reduces inventory and lineside stock by automating manual activities. It enables automated replenishment, supports complex event detection, autonomously reconfigures internal flows and simplifies human-robot interaction at the lineside.

The key benefits of using this IoT-enabled, network of Automated Guided Vehicles comes from fewer errors in kitting, shorter duration of stock-out, more jobs completed per hour, and eventually smaller warehousing and stock-out costs.
The ILAADR was integrated into the trials of existing enterprise resource planning systems (ERP), warehouse management systems (WMS) and Material Requirements planning systems (MRP). This way the Automated Guided Vehicles became part of factory operations requiring less human intervention.

The activity partners were DFKI, who created the robotics platform component for Mobypick, Fraunhofer-IML, who provided the robotics platform component for Mobypick, Reply implemented the integrated software platform and Aalto: design of separator for bin picking. Reply integrated the complete system, and the system was tested at a FIAT-Chrysler Automotive (FCA) factory.

The target market of this solution is the manufacturing industry, especially the automotive, electronics and pharmaceutical sectors.

Digital Industry

Scaleup Case Study

APPRL

APPRL, a Swedish scaleup, developed an innovative solution for Shoppable Content Advertising which solves challenges that brands, retailers, influencers and media houses face due to rapidly transforming digital media. The platform developed by APPRL makes it possible for premium lifestyle media and influencers to connect the content of articles or magazines with the final goods customers reading digital media can then purchase.

APPRL's solution offers its users the ability to monetise their content in a way that their readers love. It enables new revenue streams for influencers and digital magazines by making it simple to create great shoppable content in just minutes. These influencers and digital magazines can create, with the APPRL technology, interactive collages, popup shops and other types of articles with products that the readers can buy. Partners like Elle magazine, Net-A-Porter, Luisaviaroma, Thomas Sabo, Metro Mode, Gina Tricot and many more already use the APPRL solution.

APPRL, supported by EIT Digital, raised a €1.25m funding to scale across Europe. The funding round was led by Spintop Ventures, joined by business angels with a strong advertising and media background.

"We want to create a new standard for digital marketing. We've already become the main marketing channel for many of the brands we're working with even though we've just built a first version of the tool," says Martin Landén, APPRL Co-founder & CEO.

APPRL

Digital Industry

Scaleup Case Study

KONUX

KONUX, a scaleup based in Munich, builds smart sensor systems that provide insights that can help to prevent machine and infrastructure breakdowns. By combining measured data with the right analytics, KONUX enables customers to understand their machine problems and make maintenance predictable, helping to reduce expenses by 25% or more. This can be applied in many sectors including railway, aviation, pipeline, robotics and industrial automation.

KONUX joined the EIT Digital Accelerator in 2014 after winning first prize of the Idea Challenge startup contest in the Cyber-Physical Systems category. KONUX experienced powerful traction and won multiple customers including Deutsche Bahn, one of the world's leading passenger and logistics railway companies operating in 130 countries across the globe.

Within the EIT Digital Accelerator, KONUX benefited from sales training and since the team also planned a US roadshow, they also benefited from a working place at Rocketspace in the EIT Digital Silicon Valley hub and connections via local business developers. KONUX was also showcased at SEC2SV (Startup Europe comes to Silicon Valley), a matchmaking event to meet potential customers.

On 14 April 2016, KONUX, raised an investment of $7.5m. The company completed a fundraising led by German Venture Capital investor MIG, together with UnternehmerTUM, the US firm New Enterprise Associates and the Silicon Valley-based Business Angel, Andy Bechtolsheim. The funding will be used to expand the product platform, roll out products in volume for new and existing customers and establish KONUX as the leading company for machine insights.

Jean Gelissen
Action Line Leader

Digital Wellbeing

The focus of the Digital Wellbeing Action Line is to slow down the growth of health care expenses while maintaining quality of life during working years and at advanced age by leveraging digital technologies to help people stay healthy or cope with existing chronic conditions.

Worldwide Wellbeing Megatrends support this aim: "*an ounce of prevention is worth at least a pound of cure".*

Factors that enable and support this trend are the growing role of prevention, the blurring of lines between healthcare and wellness and the (positive) impact on the cost of healthcare by the introduction of digital technology. At the same time, the demand for healthcare services is growing due to the ageing population.

The activities of the Action Line operate in four quadrants supporting physical as well as mental balance both during working life (occupational health) as well as at a higher age (active & healthy ageing) by applying digital technologies. The digital technologies applied consist of (unobtrusive) world class and validated sensors and actuators, as well as domain-specific data analytics algorithms from the EIT Digital partner network and application-specific associated partners.

The solutions, allowing one to stay healthy (primary prevention) or cope with an existing chronic condition (secondary prevention), should have sustainable business models and allow for large scale deployment of the solutions while securing the customers' privacy and security.

During 2016, the Digital Wellbeing Action Line managed six Innovation Activities, supported the Digital Wellbeing Business Community and organised and executed the Digital Wellbeing Dissemination.

The Action Line also organised and executed two successful summer schools within the EIT Digital Master School. The two summer schools were attended by a total of 86 students (42 in London representing 23 nationalities and 44 in Eindhoven representing 27 nationalities).

Alongside the organisation and execution of the two summer schools, the ERB integration was supported by internships of Master School students in Innovation Activities and the assignment of four Post Master positions in selected Innovation Activities. Besides these four Post Master positions, two Master School students from the previous cohort were offered jobs within an Innovation Activity after their internship, these offers were accepted, and the former Master School students operated very successfully as full team members in the High Impact Initiative Fit to Perform.

The Action Line's activities and business community scaleups were involved in many dissemination activities ranging from press or magazine publications, and presence at events organised by EIT Digital or external parties including the IAA 2016 (where Fit to Perform and Astrata presented the Fit to Perform solution) and the EIT Digital partner event.

Digital Wellbeing

High Impact Initiative

Fit to Perform

The Digital Wellbeing Action Line executed the Fit to Perform High Impact Initiative during 2015 and 2016. It will be continued as regular activity during 2017 to prepare for the launch of the resulting start-up, Ready To Perform, which is intended to provide commercial services to its customer telematics companies, from mid-2017 onwards.

The Fit to Perform solution is an end-to-end solution to include driver fitness indicators in transport company telematics solutions. It is a valuable add-on to current telematics solutions, enabling planners and fleet managers to monitor both their vehicles and drivers as a complete and integral system, giving greater insights into both the drivers and the environments that they navigate every day.

The essential components are:

1. A wearable with state-of-the-art sensors to register the physiological signals of the drivers, including an Optical Heart Rate sensor and a Galvanic Skin Responsesensor.

2. Advanced algorithms to derive the fitness indicators from these physiological signals, especially sleepiness, vigilance and stress.

3. An open data enabling ICT-infrastructure that allows multiple applications to simultaneously access and use the physiological data and fitness indicators, while keeping the driver in control over who can access them, ensuring compliance with data privacy legislation.

Digital Wellbeing

Innovation Activity

GameBus

The key concept of GameBus is to let people play different games they enjoy as an individual in such a way that they are part of an integrated social interaction.

GameBus is brought to the market by Eindhoven University of Technology. The mission is to stimulate healthy social, cognitive and physical activities via a personalised gaming experience. The base app is available for free via the Google Play Store and the iOS Appstore alongside a web version. Currently, all integrations to apps are available for free but soon some premium integration will be available via app purchases. The main revenue stream comes from B2B

partnerships with occupational health providers, prevention advisors, insurance companies, municipalities, patient organisations, gym owners, schools and other organisations that want to reward healthy behaviour.

GameBus includes a unique, cloud-based core technology approach to defining new health competitions, the calculation of scores for activities of different kinds and different types of users, aggregation of data in attractive leaderboards and activity dashboards and collection of activity data from multiple sources.

The GameBus free app enables anyone to connect with their sports club members, colleagues, family members (including children and the elderly) and tackle the motivational issues which currently limit our health, emotional well-being and overall vitality.

The next steps are to integrate the business with an existing strategic partnering platform and various other peripheral partners. The first large deal will be closed with an occupational health provider in 2017 and multiple larger deals are expected in 2018.

Digital Wellbeing

Scaleup Case Study

The Business Community was very active in 2016 and the results have been above the set targets.

The Digital Wellbeing Business Community members indicated the following markets as most relevant for their operation: Occupational Health and Healthcare/ professionals (in the Ambient Assisted Living context). These priorities have been taken used to select appropriate events in which to participate such as exhibitions and conferences.

Some examples of scaleups in the Digital Wellbeing Business Community portfolio include:

Firstbeat

Firstbeat transforms heartbeat data into personalised insights on stress, exercise and sleep. It's applied to provide Wellness Services by unique analysis on stress, exercise and sleep for wellness professionals, occupational health and corporate wellness, support Professional

Sports by complete monitoring solutions for team sports coaches to optimise training load and recovery.

It powers over 70 Consumer Devices by analysing the heartbeat to produce meaningful insights for training, wellbeing and performance.

Firstbeat's products and innovations are built on over 20 years of research. Areas of investigation include physiology, psychology and psychophysiology.

Digital Wellbeing

Scaleup Case Study

Soma Analytics

Soma Analytics offers an evidence-based mobile programme to increase employee emotional resilience. It delivers unobtrusive stress management via smartphone and personalised interventions. SOMA Analytics measures, manages and reduces stress in the workplace. With only a smartphone, stress can be measured on a scientifically validated basis, built on the experience of Soma Analytic's partners who are world-leading researchers in psychology, sleep medicine and data science. Kelaa, Soma Analytics product available for Android and iOS, provides exercises and challenges based on cutting edge research and applies cutting-edge technology based on big data and sophisticated algorithms for accurate and powerful analytics.

Kelaa uses the built-in sensors of smartphones and doesn't require any wearables. Employees simply download it to their smartphones, guaranteeing high adoption rates across your company. After just three weeks of using Kelaa, employees show clear signs of reduced stress (up to 15%). Stress reduction leads to higher productivity, less absenteeism and lower attrition rates. Also after three weeks of use, employees

experience an increase in Mental Resilience (up to 11%). Higher resilience levels foster creativity and productivity, as well as greater employee engagement.

The Kelaa App for employees supports in the development of mental resilience and mindfulness by providing exercises and challenges to learn to focus attention, manage stress and think positively. Secondly, it supports wellbeing by measuring and improving sleep. Lastly, it enhances performance and productivity by Managing time and tasks more effectively leading to better productivity at work.

AYO

AYO is the first comprehensive light-based, beautifully designed wearable, which is fully controlled and operated by the AYO (Android and iOS) app. Short exposure to the gentle AYO blue light enhances energy levels and alertness as well as helping the user's body rhythm according to the user's lifestyle and preferences. AYO has been created with a focus on an attractive and portable design, smart capabilities and unique user experience.

Henrik Abramowicz
Action Line Leader

Digital Infrastructure

The Digital Infrastructure Action Line is a core enabler of digital transformation by providing secure, robust, responsive and intelligent communications and computation facilities. Two of the four EIT Digital High Impact Initiatives were hosted by the Digital Infrastructure Action Line in 2016.

The Digital Infrastructure Action Line targets networking (mobile broadband infrastructure, network softwarisation, Internet of Things - IoT), computing (cloud computing, Big Data, artificial intelligence), and security (privacy, cyber security, digital identity management). A key element of its work is the convergence and integration of the above technologies to support a diverse set of applications (e.g. IoT) and to drive the digital economy overall.

During 2016, the Action Line had 16 Innovation Activities as part of its portfolio: four networking-oriented (including the Advanced Connectivity Platform for Vertical Segments High Impact Initiative); four cloud-oriented activities (including the Trusted Data Management with Service Ecosystem High Impact Initiative), and eight relating to Privacy, Security and Trust.

2016 highlights

In 2016 the Digital Infrastructure Action Line priorities were related to Internet of Things, mobile broadband for networking, trusted cloud and privacy for the cloud, and general work on privacy, security and trust. In addition to EIT Digital partners, several EIT Digital Master and Doctoral school students were involved in the work of the Innovation Activities.

2016 saw some impressive results: 28 business ideas or innovations incubated, one start-up created, 39 Knowledge adoptions, 27 knowledge transfers, and 22 new improved products, services or processes launched on the market.

The Action Line organised three summer schools as a joint endeavour with the EIT Digital Master school with the aim of teaching innovation and entrepreneurship based on real cases from industry. Some of the summer school lecturers came from the Action Line's Innovation Activities and others from industry providing real-world insight to the issues the students encountered. In addition, a number of lecturers from the wider academic world were invited.

Two summer schools were organised in Stockholm; one focusing on Internet of Things, and one on big data and artificial intelligence. A third, focusing on privacy, security and trust was held in Trento. All three had around forty students participate.

The most important dissemination activities in 2016 were held in Stockholm and Rennes during November. The Stockholm activity was part of the Internetdagarna ("Internet Days") and focused on Cloud and networking activities following a theme of "Infrastructure driving Europe's Digital Transformation". The Digital Infrastructure Challenge Finals competition, organised in connection with the event, was won by Spanish AOIFE Solutiones. The Rennes activity focusing on Privacy, Security and Trust related Innovation Activities was organised in conjunction with the French Cybersecurity week.

During 2016, the Digital Infrastructure Action Line participated in special events like the BlackHat EU cybersecurity conference in London and Cloud Reliability Workshop organised in the Berlin Co-location Center. Berlin CLC also hosted a joint Institute of Electrical and Electronics Engineers (IEEE) – EIT Digital workshop on testbeds and certification of software-defined networks (SDN) and network functions virtualisation (NFV) with participants from the United States and Europe. The Action Line also participated also in a Net Futures event organised by DG CONNECT in Brussels with some of its Business community scaleups.

Digital Infrastructure

Innovation Activity

Multi-Cloud Data Analytics as a Service

Cloud computing is an enabler for advanced analytics with big data. Exploitation of big data technologies in the Cloud is not easy for many companies, especially for small and medium-size enterprises, as they struggle to find a convenient and affordable approach to exploit Cloud and big data technologies to the benefit of their business. Also, concerns, like lack of security and mistrust of Cloud services, slow down the adoption of these technologies, having significant impact on the European big data and Cloud business potential.

Multi-Cloud Data Analytics as a Service Innovation Activity aimed to extend the benefits of Big Data Analytics to Multi-Cloud environments by providing a flexible, secure and on-demand hybrid cloud platform for big data analytics offering innovative functionalities with regards to security, scalability and fault-tolerance.

Spanish electricity, gas and water utility provider ATOS and the UK's British Telecom, tested the MCloudDaaS platform in 2016.

The tests validated that MCloudDaaS's flexible, secure and on-demand hybrid cloud platform helped customers to avoid 'vendor lock-in' to particular cloud offerings. It also provided increased trust and security, enhanced manageability, predictable performance and solution scalability, as well as reduced capital-expenditure (CAPEX) by avoiding overprovision.

Digital Infrastructure

High Impact Initiative

European Trusted Cloud Ecosystem

The goal of this High Impact Initiative is to provide consumers and businesses with better tools and services to take greater control over the use of sensitive and personal data created by and about them. At the same time this data is enabling and stimulating business growth – companies within the trusted service eco-system, accelerated by the HII, are developing innovative and trusted products and services which can be tailored and personalised for the specific needs of the individuals and businesses.

In November, the drive to accelerate the European Trusted Cloud took a major step forward as the European cyber security provider F-Secure, and EIT Digital partner participating in this High Impact Innovation Activity, started routing out malicious content in Cloud platforms with a software product using an interface produced by this Innovation Activity. The product was unveiled for the first time at Salesforce's Dreamforce '16 sales conference. This was followed by another Application Program Interface – API using the same interface running on Amazon API Gateway and available on Amazon Web Services (AWS) Marketplace.

In addition to F-Secure, other EIT Digital partners participating in the Trusted Data Management with Service Ecosystem High Impact Innovation Activity included: British Telecom, Telecom Italia, Reply, Bittium and a multitude of SME's and research institutions.

Digital Infrastructure

High Impact Initiative

ACTIVE

Advanced Connectivity Platform for Vertical Segments

The Advanced Connectivity Platform for Vertical Segments (ACTIVE) High Impact Initiative focuses on creating a connectivity platform where sensor systems are integrated into general cellular networks. By doing this, the platform creates an end-to-end (E2E) network, which could be applied to a range of different sectors.

One of the outputs from the ACTIVE Initiative was a technology which could reduce the numbers of wire harnesses and pins entering the fuselages of helicopters and aeroplanes.

EIT Digital partner, and the leader of the Innovation Activity, Polytechnic University of Milan, teamed up with an aircraft manufacturer to implement the technology commercially at the end of the year.

Manufacturers of avionic systems have long looked for more efficient and less expensive ways to collate and transmit flight-critical data. The technology, as applied to avionics systems, promises to dramatically reduce the number of wires, cable harnesses, connectors and pins in the fuselage and elsewhere in the aircraft which makes the system more efficient and reduces costs.

The solution is based on existing data transmission technologies, sensors, and data concentrators. Together they perform a data pre-processing function that both reduces the data rate and aggregates the compressed data into a unique data stream. This stream can then be transmitted by wireless or wired transmission technologies or a combination of the two.

Digital Infrastructure

Innovation Activity

ICARO Broadband Direct Air-to-Ground Communications

The move towards high-speed broadband connection on aircraft in Europe.

Faster and cheaper connectivity on aircraft is a high priority for airlines and is set to become a "must-have" offering in the coming years. Although access to the Internet while airborne is already a reality, the speed available might not even be good enough to check e-mails. In the age of digitalisation, most business passengers expect to be able to work on an aircraft as easily and seamlessly as at the office or at home. The traditional satellite connections currently used by airlines is starting to be seriously challenged by Broadband Direct Air-to-Ground Communications (BDA2GC) technology. It is seen as the major competitor to satellite-based connectivity solutions to provide additional speed and capacity. BDA2GC will be not only cheaper than satellite connections but also faster and more stable. EIT Digital and its partners are at the forefront of this promising technology.

The EIT Digital ICARO-EU Innovation Activity together with partners Ericsson, Airbus Group Innovations, KTH Royal Institute of Technology, and Create-Net developed a technology that could provide high-speed broadband to passengers in aircraft flying in Europe and potentially beyond. It is also expected to provide improved services for transportation safety bodies and European flight movement tracking agencies.

BDA2GC technology is expected to become the most cost-effective solution to connect flights over landmasses. It works through three main components: a network of radio base stations on the ground, an on-board radio device on aircraft that is connected to a beam-forming antenna placed on the lower fuselage of the aircraft, and long-term evolution – LTE small cells in the aircraft. Once the aircraft is airborne, the Aircraft Station connects to the closest available Ground Station. The radio signal is then distributed in the aircraft using LTE that will supplement existing on-board Wi-Fi technology to improve performance. The objective is that BDA2GC technology will meet the needs of mobile customers that expect to be connected anywhere, anytime, with all kinds of mobile devices. It also answers the great interest of European airlines to offer internet services to their passengers across their fleets as soon as possible.

Digital Infrastructure

Scaleup Case Study

SecurityMatters

The Dutch scaleup SecurityMatters has developed an innovative automated network and situational awareness platform that enables Critical Infrastructure organisations worldwide to operate best-of-class cyber-resilient Industrial Control Systems. Self-configuring and self-learning, SecurityMatters' solution detects more cyber threats than any comparable technology.

Headquartered in the Netherlands, SecurityMatters has expanded its installed base in installations across four continents, covering multiple market verticals including electric-power generation, transmission and distribution, oil and gas, drinking water, manufacturing, chemical, pharmaceutical and infrastructure.

With the support of the EIT Digital's Access to Finance team, SecurityMatters has raised substantial funding from four prime investment groups. The German Corporate Venture Fund Robert Bosch Venture Capital provided a share in funding that helped SecurityMatters to expand their sales & marketing and support teams internationally for protecting Critical Infrastructure organisations. SecurityMatters aims to take a lead in critical infrastructure markets where operational networks are heavily exposed to cyber-attacks.

"With these investments, we are now able to establish our presence globally and compete with the largest players across the globe. When we created the company seven years ago, we had a precise idea of the technology we wanted to put to work, and gradually we kept our objective to provide the best-in-market product. Now, with a proven solution and the support of EIT Digital we secured the needed strategic investors in our company," says Damiano Bolzoni, CEO and co-founder of SecurityMatters.

Digital Infrastructure

Scaleup Case Study

Sentryo - Cybersecurity for the Industrial Internet

The Industrial Internet covers machine-to-machine networks and cyber-physical systems interacting with the physical world. It stretches from command and control networks to the upcoming Industrial Internet of Things (IIoT), creating a digital and software based nervous system.

The French scaleup Sentryo is pioneering the market for cybersecurity protection for machine-to-machine (M2M) networks and critical industrial systems. Sentryo's German operations are hosted by EIT Digital's Munich satellite office. The satellite provided vital support in helping Sentryo to scale up to a new neighbouring European market by identifying and introducing several potential customers and by generating leads.

Industrial Control Systems (ICS) lie at the very heart of the industrial cyber security issue. As a preferred target of attackers striking the industrial sector, industrial control systems oversee and drive large critical infrastructure. Accordingly, Sentryo focuses on critical infrastructures exposed to cyber-threats in industries, like energy, transportation, critical manufacturing and process industries.

The Sentryo ICS CyberVision solution delivers operational security capacity to prevent, detect and respond to cyberattacks targeting the industrial internet. The solution enables collaboration between operational and information technology staff over a simple and intuitive tool designed for non-cybersecurity experts.

"This is vital, as mistrust is often the weakest link in the industrial control system-related cyber security, as the cyber security experts, control engineers, security officers are not yet working in a synchronised way. Our solution overcomes the challenge by offering a common language and collaboration solution centred on risk management", says Mr Thierry Rouquet, CEO at Sentryo.

Sentryo's solution enables control engineers to understand detailed situations and current risk exposure, permitting them to reduce the attack surface. Further, it provides security officers with reports to measure progress and help them comply with existing and upcoming regulations. The cyber security experts at secure operation centres can monitor all significant events and detect any abnormal behaviours or anomalies, not part of the baseline.

Sentryo also facilitates incident responders by providing them with all required forensics data.

Collaborations with European programmes and initiatives

EIT Digital actively engages with European programmes and initiatives. In 2016, EIT Digital was active in three areas: the "Future Internet Research and Experimentation+" program of DG Connect (now in the "Future Connectivity Systems"); the "Future Internet Public-Private Partnership (FI-PPP)"; and the "Big Data Value Public-Private Partnership (BDV-PPP)". Common elements of all our cooperation efforts are: clear added value to the pursuance of the SIA; synergies with Action Lines; strong involvement of our partnership.

Future Internet Research and Experimentation+ (FIRE+)

The availability of testbeds for experiments and validation purposes is a crucial enabling factor for the deployment of products, services and applications of the Future Internet. Within our collaboration with the FIRE+ program (now in the "Future Connectivity Systems" of DG Connect), EIT Digital is coordinating a project aiming at federating NFV/SDN testbeds provided by major European players (most of them partners of EIT Digital) and at making them available to the larger community of developers and innovators.

The project, called SoftFire (www.softfire.eu), started on 1 February. Through an Open Call and an InterOpTest (Interoperability Test) it has already offered plenty of opportunities to third parties to exploit the SDN federated testbeds to develop new services and applications.

SoftFire is part of a wider strategy of EIT Digital that aims at paving the way towards innovative businesses around SDN and NFV.

The Future Internet Public-Private Partnership (FI-PPP)

The "Future Internet Public-Private Partnership (FI-PPP)" is a European programme for Internet-enabled innovation, aiming at accelerating the development and adoption of Future Internet technologies in Europe, advancing the European market and increasing the effectiveness of business processes through the Internet. Formally signed during 2013, our collaboration with the FI-PPP in 2016 unfolded through I3H ("Incubating Internet Innovation Hubs (I3H - www.fi-ppp.eu/i3h). Concluded in December 2016 and coordinated by EIT Digital, this project supported the penetration of the FIWARE platform in the European innovation ecosystems through the establishment and launch of a network of "Internet Innovation Hubs", organisations (incubators, accelerators and the likes) committed to disseminate and support FIWARE adoption in their ecosystems. The network has taken a formal nature through the iHUB.eu legal entity (ihub.eu) and is now fully integrated into the FIWARE community.

The Big Data Value Association

The BDV-PPP is a European programme aiming at strengthening the data value chain, in order to allow Europe to play a major role in Big Data in the global market. In June 2015, EIT Digital signed a memorandum of understanding with the "Big Data Value Association (BDVA)", the private counterpart to the European Commission in the BDV-PPP.

The BDVA is tasked with involving industries, research centres and academia, building a pan-European data community and setting the grounds for a thriving data-driven economy in Europe.

The first installation of the MoU was the successful joint submission with many of the major players of the BDVA, of a proposal for a coordination action aimed at setting up the conditions for a successful deployment of the results of the BDV-PPP. The project, called BDVe, will start in January 2017. EIT Digital's role concerns framing the conditions for skill-building for big data specialists and the establishment of receptive innovation ecosystems.

Edna Ayme-Yahil
Head of Communications

Communications

2016 has been a busy year as EIT Digital continues to deliver more innovation, requiring a growing communications effort to ensure that the positive work EIT Digital is doing is shared externally.

Our strategic communication goal is to establish EIT Digital as a leading innovation and entrepreneurial education brand across Europe by running well-thought out campaigns across Europe. Communications messages are targeted towards three separate subgroups: Knowledge triangle stakeholders (business leaders, investors, entrepreneurs, researchers, universities, students and academia), multipliers (policy makers and European networks) and the media (digital, online, European press, national press and local press).

Our key event was the launch of our Strategic Innovation Agenda (SIA) for 2017 – 2019 in Brussels in the presence of Martine Reicherts, DG EAC and Michal Boni MEP. This was followed by national launches of the SIA in all of our Node countries.

Our primary communications channels are European and national media, social media and our EIT Digital websites. We've had over 5,000 articles appear this year in journals such as El País, Le Monde, Forbes, La Libre Belgique, Die Welt, Frankfurter Allgemeine Zeitung, Il Sole 24 ore, La Stampa and Het Financieele Dagblad. We have over 82,000 followers on our social media channels, which include: Twitter (KIC, EIT Digital Accelerator and EIT Digital Academy), LinkedIn (KIC) and Facebook (KIC, EIT Digital Accelerator and EIT Digital Academy). Across the various social media channels, we had 4,300 posts, 26.7 million impressions, 21,800 clicks and 46,100 engagements in 2016. We nearly doubled the number of visitors from the previous year to over 1.3 million to our various websites, which include the EIT Digital website as well as separate sites for our Master, Doctoral and Professional schools.

Other 2016 highlights were the Conference and Partner Event held in Brussels in April for more than 500 of our key stakeholders, the 4th Master School kick off in October and the graduation of the first of our Doctoral students in December. We also ran our third EIT Digital Challenge. Our brand was visible at several key events including SEC2SV, InnovEIT, Netfutures and Slush which all served as an opportunity for our Innovation Activities and coached scaleups to raise the profile of their products, generate leads and secure deals.

Looking forward, 2017 will be an important year in terms of further honing and targeting our message in line with our SIA as well as our Business Plan. We will also be working to support the organisation as we begin to diversify our income streams and move towards sustainability.

Alumni

2016 was a remarkable year for the EIT Digital Alumni Foundation. We went through many developments, initiated numerous activities, our Community grew significantly in size and shape, and our members were featured as international success stories. We are looking forward to carefully executing our work plan throughout 2017 as we fulfil our mission of keeping up strong connections between fellow alumni and the EIT Digital ecosystem.

Our Community by Numbers

In 2016, the number of registered alumni members increased by 144 (218%) to a total of 210 members. In addition, there are 62 associate members, consisting of current Master and Doctoral students, as well as external participants of the EIT Digital Summer Schools. Combined, the total size of the Community by the end of the year reached 272 members.

With an average onboarding rate of roughly 70% over the 2012, 2013 and 2014 cohorts, the largest segment of our Community, over 95%, is made up of graduates from the Master School educational activity. In 2017, we are eager to invite all eligible graduates as well as former employees of EIT Digital to join our Community by creating a profile at alumni.eitdigital.eu. Moreover, we look forward to the graduation ceremonies of the Doctoral and Master Schools which are important onboarding events for our association. At the 2016 Master School graduation ceremony in Stockholm, our conversion rate was almost 90%.

Vibrant Community

With the help of our local alumni representatives, we gave some 18 presentations of the EIT Digital Alumni Community including sessions at six EIT Digital Summer Schools and 4 "Welcome Day" events around Europe, reaching an estimated audience of more than 1.5K people and several hundred prospective alumni members.

Over the course of 2016, we worked hard on the creation and organisation of local events, organising 13 events in six different locations involving more than 500 people. We also created a startup contest and sent the winner to represent our Community at Slush 2016 in the early-stage startup competition track. The Women@EIT (Digital) initiative has officially been confirmed as the first activity-based working group of the EIT Digital Alumni, and will soon expand to other locations in Europe beyond Stockholm.

Cross-KIC Alumni collaboration

The EIT Digital Alumni Association agreed to participate in the establishment of the first EIT Alumni Board which was officially appointed on 8 April 2016 by EIT Interim Director Martin Kern. The mandate of this Board is to drive cross-KIC alumni collaboration initiatives and provide effective representation for the entire community.

In this respect, we successfully co-organised a couple of additional events, including the 2016 edition of Startup Days. The event took place in six European cities simultaneously: Barcelona, Berlin, Eindhoven, Lisbon, Paris and Stockholm on the first weekend of December 2016. As a key pillar of the broader EIT Alumni Community, EIT Digital Alumni and our members not only had a crucial role in organising and executing this start-up competition but also took the leadership role in a number of locations and oversaw the overall financial aspects related to the event. In total,

there were more than 300 people involved in the Startup Days, with 177 participants coming from 34 different countries.

Social Media and Communications

A more frequent and targeted communication strategy resulted in significant gains in follower counts across our channels. We saw an increase of 400% of Facebook Likes and a ten-fold increase with respect to the average total reach and engaged users. On Twitter, our follower count increased by 53% and the total impressions reached 81.5k. We also established two new profiles, namely a LinkedIn page and a Telegram channel, each gaining promising organic follower counts within the space of a few months. In 2016, we sent out three newsletters and our publication audience reached 256 subscribers, with an open/click-rate of three times the industry standard.

In 2016 we initiated the process of upgrading our website and intranet, which is expected to launch in 2017 along with a number of new services. This should allow for a better and more centralised online engagement of our community while also allowing the Alumni Board to keep better track of the careers and whereabouts of our members.

Financial Review

Stan Smits
COO

In 2016 EIT and the KICs have agreed on a streamlined process for Grant Management. This has resulted in an earlier payment of the 2015 balance payments and approval of the 2017 Specific Grant Agreement and Business Plan. We expect the same performance in 2017 for the approval of the 2016 KIC Report and balance payment.

The Grant Agreement 2016 and associated Business Plan were signed on 2 May 2016 for the total budget (catalyst and carrier) of €290,391,008. The Catalyst budget was estimated at €96,498,713 with a maximum EIT contribution of €75,074,941.

This budget was the basis for the Internal Agreements Grant 2016.

In October 2016, the Business Plan Addendum was submitted to EIT to reflect the evolution of the Activities over the first eight months as reported by the partners in their budget change requests. This resulted in Amendment 1 of the Grant Agreement 2016 signed on 21 December 2015. The budgets against which the reporting has taken place were €276,818,886 for the total budget, €92,325,015 for the Catalysts with a maximum EIT contribution of €71,591,357.

During 2016 one amendment to the Internal Agreement Grant has been approved in October. The October Amendment solely contained Activity change requests to reflect the reduced budgets from the Business Plan Addendum. The provisional actuals reported by the partners on February 28th 2017 are €277,985,873 or 100% of the overall budget, €86,0209,355 or 93% of the Catalyst budget and an EIT Request of €62,855,637or 88% of the EIT budget. In April the final actuals will be published on the EIT Digital website.

The overall spread per segment in EIT contribution request versus budget is small (between 80% and 92% of the budget). The overall KAVA actual and Total actual is very close to budget due to higher co-funding and complementary funding contributions than budgeted. We expect this performance to improve once the Cost Reporting is finished because a few partners are delayed in their submission.

Action Lines	EIT budget	KAVA budget	Total budget	EIT actual	KAVA actual	Total actual
Education	**€13,854,020**	**€15,975,981**	**€30,707,733**	**€12,227,901**	**€15,087,191**	**€28,639,051**
MSL (EIT Labelled Master Programmes)	€8,369,623	€9,893,973	€16,358,807	€7,519,885	€9,639,800	€15,670,635
DSL (EIT Labelled PhD Programmes)	€2,105,492	€2,180,585	€6,672,335	€1,764,446	€1,889,769	€5,777,385
PSL (Training of Professionals and Executives)	€1,431,374	€1,583,759	€5,208,927	€1,257,304	€1,466,178	€4,981,364
EDV (EIT Digital Education Office)	€1,947,531	€2,317,664	€2,467,664	€1,686,266	€2,092,443	€2,209,666
Innovation and Research	**€40,308,574**	**€57,784,334**	**€222,637,953**	**€35,274,719**	**€54,016,084**	**€226,352,530**
INF (Digital Infrastructure)	€12,485,985	€19,622,197	€80,109,942	€10,343,403	€17,267,909	€68,825,530
IND (Digital Industry)	€12,357,220	€17,992,453	€73,526,554	€11,384,632	€17,567,741	€93,084,017
WEL (Digital Wellbeing)	€4,946,417	€6,928,347	€34,806,391	€4,421,728	€6,859,903	€33,137,503
CTS (Digital Cities)	€5,464,345	€8,108,090	€29,061,819	€5,064,514	€8,072,548	€27,057,892
XAL (Cross Action Line Activities)	€5,054,607	€5,133,247	€5,133,247	€4,060,442	€4,247,982	€4,247,982
Entrepreneurship	**€5,475,262**	**€5,133,247**	**€9,433,762**	**€4,977,056**	**€5,173,515**	**€10,315,393**
BDV (Acceleration)	€4,861,012	€4,861,012	€8,819,512	€4,477,038	€4,673,496	€9,815,375
BPS (Business Prizes and Support)	€614,250	€614,250	€614,250	€500,018	€500,018	€500,018
Management and Coordination	**€9,227,750**	**€10,636,688**	**€11,313,688**	**€8,013,528**	**€9,348,902**	**€10,284,236**
COR (KIC Coordination)	€2,775,750	€2,802,000	€2,802,000	€2,202,992	€2,260,412	€2,260,412
CLI (Nodes and CLCs)	€6,452,000	€7,561,688	€8,511,688	€5,810,535	€7,088,491	€8,023,825
Communication, Dissemination and Outreach	**€1,632,000**	**€1,632,000**	**€1,632,000**	**€1,430,985**	**€1,454,558**	**€1,454,558**
MKT (Communications, Dissemination and Outreach	€1,632,000	€1,632,000	€1,632,000	€1,430,985	€1,454,558	€1,145,558
EIT Regional Innovation Support	**€1,093,750**	**€1,093,750**	**€1,093,750**	**€931,449**	**€940,105**	**€940,105**
RIS (Regional Innovation Scheme)	€1,093,750	€1,093,750	€1,093,750	€931,449	€940,105	€940,105
Grand Total	**€71,591,357**	**€92,325,015**	**€276,818,887**	**€62,855,638**	**€86,020,355**	**€227,985,874**

Outlook

Willem Jonker
CEO, EIT Digital

"Delivering Transformation" is our motto for 2017. Delivering transformation when it comes to rolling out our new governance structure, transforming our community into a sustainable, impactful and future-proofed organisation. Delivering transformation through the commitments in our new Strategic Innovation Agenda 2017-2019. Delivering on sustainability via the transformation of our innovation and education activities. And most importantly delivering on the digital transformation of Europe by providing the digital skills and innovations needed.

2017 is an important year due to the EIT midterm evaluation and the discussions around the role for EIT as the key instrument for entrepreneurship and innovation in Europe in the successor program of Horizon 2020, Framework Program 9. We work closely with the EIT and the other KICs to grow and enhance our collective impact.

In early 2017, we will move our office in Brussels to a new building together with the other KICs, to create an EIT/KIC house with permanent space for events and demonstration of impact by the KICs. Finally, EIT will publish their first study on the impact of the KICs in innovation, entrepreneurship, and entrepreneurial education.

Our ecosystem will have a strong start in 2017 with the opening of two full Nodes, in Budapest and Madrid. This will allow a further expansion of our activities in Spain, Hungary and beyond into Central and Eastern Europe via the Budapest Node. This will bring the number of European EIT Digital Nodes to nine. For our Hub in Silicon Valley, we will have a transition to a new director, since Marko Turpeinen will resume his position as Node Director in Helsinki. We will also further develop our ARISE programme with new regional Digital Innovation centres in three more EU countries. The ARISE programme assures our impact and visibility throughout Europe, and as part of that, we are proud to be a co-organiser of Startup Nations Summit 2017 in Estonia alongside Startup Estonia and the European Commission.

Our innovation and entrepreneurship activities will have an even stronger focus on market delivery and return on investment. In 2017, we expect a 50% increase with respect to 2016 in delivering new products and services. We also expect a 20% increase in the number of ventures created from our Innovation Activities. Further deployment of our sustainability approach will take place via return on investment schemes as well as equity positions in new ventures. Our Accelerator will focus on increased revenue for the scaleups in our portfolio, more than doubling the 2016 level to an average of €3.5m. Also, the total valuation of our portfolio is supposed to double with respect to 2016. Finally, we expect an intake of at least 60 scaleups under the new term sheet thus contributing significantly to the sustainability of EIT Digital. Two new Action Line leaders will join us in the beginning of 2017, Stéphane Péan will lead Digital Cities, and Johan Kortas will lead Digital Wellbeing.

Our education activities will see quite some change. Both the Doctoral and Professional schools will welcome new leaders in the beginning of 2017. While our education activities are strong, we will strive to reach greater results in areas like recruitment and operational excellence. In our Master School, we want to see improvement in the student intake from the level of 300 in 2016 to a minimum 400 new students in 2017.

The success of our post-master programme has made us decide to expand the offering in 2017. For the Doctoral school, we're aiming for an intake of 40 industrial Doctoral students, a stronger alignment with the Innovation Action Lines, a greater presence at the Co-Location-based Doctoral Training Centres, and a deeper integration of Doctoral students in our Innovation Activities.

In our Professional School, we plan a thorough revision of the strategy as well as measures to improve the quality of courses and course delivery alongside marketing and sales. This will make the Professional School ready to deliver under the leadership of the newly appointed head Jens Ohlsson who will join us in February. On-line education will be further developed in 2017 with the deployment of several MOOCs and SPOCs (Specific Personalised Open Courses) as well as two micro-master programmes on Coursera (Embedded Systems and Data Science). These programmes will offer Master school students a blended alternative where the first six months can be taken on-line. Our summer schools will be fully aligned with our Innovation Action Lines and, for the first time, we will have a Summer School organised by one of our RIS partners (Portugal).

Also in 2017 EIT Digital will be highly visible through our events, through our results and through traditional and social media. The success of our 2016 EIT Digital conference in Brussels made us decide to run this as an annual event and, this year, it will take place in March. We will (co-)organise events in our Nodes, in the ARISE countries, as well as in Silicon Valley. We will have our Challenge, our results days, our Summer Schools, our kick-off and graduation events. And of course, our activities will be visible daily in our Co-Location Centres.

2017 will see a deepening and expansion of our sustainability efforts to further mobilise alternative financing of our activities. As mentioned before, impact and sustainability are tightly coupled. Observing the value and impact created by our achievements and results makes us confident that we are on the right track to becoming the enduring, sustainable and transformative organisation Europe needs to drive digital innovation.

It is you, our partners and our people, that are crucial in making our ambitions come true. I appreciate and value your efforts, your experience and your commitment to making 2017 another very successful year for EIT Digital. I am proud to be part of these efforts, and I look forward to meeting you personally on one of my visits to our Co-Location Centres or events.

Together we will deliver on the digital transformation of Europe.

Willem Jonker
CEO EIT Digital

Management Committee

The Management Committee comprises the Chief Executive Officer (CEO), Chief Strategy Officer (CSO), Chief Operations Officer (COO), Head of Communications, the Research Director, the Education Director and seven Node Directors responsible for CLCs in Berlin, Eindhoven, Helsinki, London, Paris, Stockholm and Trento.

Willem Jonker
CEO

Stéphane Amarger
Node Director

Edna Ayme-Yahil
Head of Communications

Udo Bub
Node Director

Patrick Essers
Node Director

Anders Flodström
Education Director

Tatu Koljonen
Node Director

Dennis Moynihan
Node Director

Chahab Naster
Chief Strategy Officer

Göran Olofsson
Node Director

Fabio Pianesi
Research Director

Roberto Saracco
Node Director

Stan Smits
COO

Each Node is governed by a Node Executive Committee (NEC) elected by the Core Partners associated with that Node. The NEC appoints the Node Director who is responsible for the daily operations and who is a member of the Management Committee.

The Chief Executive Officer leads EIT Digital operations and ensures that goals set out in the Business Plan are met. The CEO is appointed and works under the supervision of the Executive Steering Board (ESB).

The Chief Strategy Officer liaises with the Education, Research and Business Directors and prepares the Strategic Innovation Agenda (SIA) and the annual Business Plan.

The COO is responsible for planning, record keeping and reporting to EIT and prepares the annual update of the Business Plan. The COO is also responsible for distributing EIT funds to the Nodes and EIT Digital Partners.

The Education and Research Directors are each responsible for developing and delivering activities in their respective areas. The Head of Communications leads and is responsible for the organisation's internal and external communications activities.

About EIT Digital

The EIT Digital management structure is light, transparent and efficient.

The General Assembly (GA) comprising Core Partners and Associate Partners is the highest strategic decision-making body.

The Executive Steering Board (ESB) is comprised of two representatives from each Node, one industry core partner and one academia/ research core partner, both elected by the GA from a list of proposed candidates. The GA appoints its Chairman, CEO and other senior management positions.

The ESB provides guidance to the CEO in strategic tasks, decides on specific funded actions, evaluates and validates the progress of these actions and approves co-funding eligibility and makes recommendations on the admission and exit of partners.

The Chairman is responsible for the strategic external positioning of EIT Digital and for securing long-term increases in private funding.

Executive Steering Board

Chairman
Raymond Freymann

Berlin
Heinrich Arnold
Deutsche Telekom AG
Wolfgang Wahlster
DFKI

London
Chris Hankin
Imperial College London
Jonathan Legh-Smith
British Telecom

Stockholm
Peter Gudmundson
KTH
Anders Caspar
Ericsson

Eindhoven
Fred Boekhorst
Philips
Peter Apers
3TU.Nirict

Paris
Jean-Luc Beylat
Nokia
Antoine Petit
Inria

Trento
Dario Avallone
Engineering
Oliviero Stock
Trento Rise

Helsinki
Eero Eloranta
Aalto University
Jukka Rantala
Nokia

EIT Digital Partners

- Aalto-korkeakoulusäätiö
- Åbo Akademi University
- Acreo AB
- Airbus Defence and Space GmbH
- Airbus DS SAS
- Alcatel-Lucent Bell Labs France
- Alcatel-Lucent Bell N.V.
- Alcatel-Lucent Deutschland AG
- Alcatel-Lucent Ireland Limited
- Alfstore
- Alcatel-Lucent Spain
- Amadeus
- ATOS Spain S.A.
- Bittium Wireless Ltd.
- Bosch Security Systems B.V.
- Bright Cape
- British Telecom
- BT ITALIA
- Budapest University of Technology and Economics
- C.R.F. Società Consortile per Azioni
- Cap Digital
- CEFRIEL S.CONS.R.L.
- Commissariat à l'Energie Atomique et aux Energies Alternatives
- Consiglio Nazionale delle Ricerche
- CREATE-NET
- CWI
- Data-Moove
- Deutsche Telekom AG
- Deutsches Forschungszentrum für Künstliche Intelligenz GmbH
- Digital Catapult
- E-Group
- EIT Digital Alumni Foundation
- EIT Digital Education Foundation
- EIT Digital IVZW
- EIT Digital Silicon Valley
- EIT ICT Labs Germany GmbH
- EIT ICT Labs Stockholm
- EIT ICT Labs Trento
- Engineering Ingegneria Informatica S.p.A.
- Eötvös Loránd University
- Ericsson AB
- Ericsson Finland
- Ericsson GmbH
- Ericsson Hungary Ltd
- Ericsson Italy
- EURECOM
- Evopro Innovation
- F-Secure
- FAM
- Fondation de Coopération Scientifique "Campus Paris-Saclay"
- Fondazione Bruno Kessler

- Fondazione Politecnico di Milano
- Fortiss GmbH
- Forum Virium Helsinki Oy
- Fraunhofer Gesellschaft
- FUNDACIÓN GENERAL DE LA UNIVERSIDAD POLITÉCNICA DE MADRID
- Future Cities Catapult
- Futurice
- Gleechi
- Green Communications
- HIT
- Huawei
- Images & Réseaux
- IMEDIA Software
- Imperial College London
- INDRA SISTEMAS S.A.
- INRIA
- Instant Systems
- Institut Mines-Télécom
- Interuniversitair Micro-Electronica Centrum
- JCP Connect SAS
- Kaba
- Karlsruher Institut für Technologie (KIT)
- Kista Science City AB
- KONE
- Kungliga Tekniska Högskolan
- Luleå University of Technology
- Lund University
- Magyar Telekom NyRt
- Missions Publiques Sarl
- Motionlogic
- Neosensys
- New Factory Ltd
- NL Org. voor toegepast-natuurwet. onderzoek - TNO
- Nokia Oyj/Nokia Research Center
- Nokia Technologies
- NXP
- OKKAM s.r.l.
- Olivetti S.p.A.
- OTP Bank Nyrt.
- Philips Consumer Lifestyle B.V.
- Philips Electronics Nederland B.V.
- POLE SCS
- Politecnico di Milano
- Politecnico di Torino
- Poste Italiane SpA
- Reply SpA
- Safemove
- Santer Reply
- SAP AG
- Security Reply
- SICS Swedish ICT AB

- SICS-V
- Siemens AG
- Siemans SPA
- Stichting Federatie 3 Technische Universiteiten
- Stichting imec Nederland
- STMicroelectronics Srl (Italy)
- Stockholm Innovation & Growth AB
- Stockholms universitet
- SYSTEMATIC PARIS REGION
- Sztaki
- Tampereen yliopisto
- Technical University of Madrid
- Technische Universität Berlin
- Technische Universität Darmstadt
- Technische Universiteit Delft
- Technische Universiteit Eindhoven
- Teknologian tutkimuskeskus VTT Oy
- Telecom Italia IT
- Telecom Italia SPA
- THALES Communication and Security SAS
- Thales Italia spa
- Thales Nederland B.V.
- Thales Services SAS
- Thales UK Limited
- TomTom
- TU München
- TU Tampere
- University Oulu
- Universität des Saarlandes
- Université Jean Monnet, Télécom Saint Etienne
- Universite Nice Sophia Antipolis
- UNIVERSITE PARIS-SUD XI
- Université Pierre et Marie Curie - Paris 6
- Universiteit Twente
- Universiteit Utrecht
- University College London
- University of Bologna
- University of Edinburgh
- University of Helsinki
- University of Trento DISI
- University of Turku
- University Rennes 1
- Vereniging EIT ICT Labs Eindhoven
- Vereniging High Tech NL
- VTT Technical Research Centre of Finland
- VTT Ventures Ltd
- WePopp