



Annual Report 2015

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*European
entrepreneurs
driving digital
innovation
& education*

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I am a strong believer in communities since they enable the building of long-lasting, trusted relationships

Raymond Freymann

Chairman, Executive Steering Board, EIT Digital

Foreword

Upon my arrival at the end of September, I made it my first priority to visit our Nodes. During my Node and Associate Partner Group visits I have met a community of students, university and industrial partners and startups, being extraordinary creative, motivated and fitted with the highest level of knowledge and skills as well as with a high commitment to the mission of EIT Digital. While Nodes have their own characteristics it is also immediately clear in all Co-Location Centres that they are part of the EIT Digital ecosystem.



Our pan-European network, our Co-Location Centres, as well as the integration of Education, Research, and Business make EIT Digital unique. A uniqueness that can be exploited even further through the ongoing development of our Co-Location Centres towards real showcases of innovation, as well as through a deeper involvement of our growing number of Master and Doctoral students in our innovation activities.

Looking ahead I see three important topics in front of us. The first is the transition to an enhanced governance structure matching the ambition of our organisation; the second is to increase the impact and disruptive nature of our activities; and the third is the development of EIT Digital as a sustainable organisation via diversification of our sources of income. Impact and sustainability are closely related and require a strong focus on value creation, go-to-market, and return on investment of our activities.

I am a strong believer in communities since they enable the building of long-lasting trusted relationships. The success of EIT Digital as a Knowledge and Innovation Community (KIC) is highly depended on the engagement of existing and new partners in the EIT Digital community. I consider it as my personal task to drive community thinking at all levels of our organisation.

*value creation,
go-to-market,
and return on
investment of
our activities*

CEO Statement

Sustain our Vision was
our motto for 2015



Willem Jonker
CEO, EIT Digital

Sustain our Vision was our motto for 2015. And that is what we did. We made our organisation stronger by clearly communicating our vision for the digital transformation of Europe. We made our organisation stronger by developing a clear strategy on how to achieve more impact and how to make our organisation sustainable in the long run. The most visible change to our organisation in 2015 has been the name change from EIT ICT Labs to EIT Digital including our logo update, resulting from the EIT branding upgrade. Not only is our new name easier to pronounce and remember, it is also more international and, most importantly, it much better expresses our mission of increased societal and economic impact by driving the digital transformation of Europe.

EIT Digital supports a pan-European ecosystem of digital hotspots in nine European countries through a consolidated network of Co-Location Centres. To connect this pan-European ecosystem to Silicon Valley in 2015 a Hub has been established in San Francisco, run by an enthusiastic team under leadership of our previous Helsinki Node Director Marko Turpeinen. Next to that, strategic relationships have been established with six Digital Innovation Centres in different EU countries as part of our Regional Innovation Scheme programme.

Our partnership has significantly grown in 2015 and we have welcomed more than 10 new industry partners, which demonstrates the attractiveness of EIT Digital to European industry. Combining innovation with education is extremely valuable since it allows industry to

transform and disrupt as well as developing the necessary skilled digital talent.

2015 has been an important year for our Education activities. With the arrival of Frank Gielen as the new head of our Professional School this activity is now fully operational and deployed its first set of courses during the year and a significant scale up of the Professional School is foreseen in the coming years. Our Master School again showed steady growth in 2015 with the delivery of over 100 Master School graduates during the graduation ceremony in Budapest and the intake of 300 Master Students welcomed at the kick-off event in Eindhoven. The Doctoral School saw a transition towards a full focus on Doctoral Training Centres located at our various Co-Location Centres. Our education programmes are all characterised by deep integration of Innovation & Entrepreneurship. During 2015 a further sharpening, differentiation amongst our schools and harmonisation within our schools has taken place.

*our mission is
increased societal
and economic impact
by driving the digital
transformation of Europe*

Willem Jonker
CEO, EIT Digital

Online education is a key ingredient of our blended education approach. In 2015 significant progress has been made with our online education modules. A complete blended MOOC (Massive Online Open Courseware) version of our embedded system Master School programme has been developed together with Stanford University spin-out Coursera via our Hub in San Francisco. Our Innovation & Entrepreneurship course is now completely available online in 25 modules delivered via the EIT Digital Sakai platform. For the Professional School a start has been made with the development of SPOC (Specific Personalised Open Courseware) modules that support a blended offering of our Professional School modules.

Our summer schools, aligned with the innovation focus of our Action Lines, attracted more than 366 participants from 43 countries. For the first time, the summer schools were open to external applicants who constituted approximately 40 per cent of the participants - a sign of the growing reputation of EIT Digital as the provider of high quality state-of-the-art digital summer schools.

Our innovation and entrepreneurship activities have delivered numerous transfers, products and services. In 2015 we witnessed another significant increase in our delivery (KPI delivery has grown 27 percent from 2014 to 2015) indicating that our operations have again become more focussed and effective. The Action Lines have delivered various technology transfers, new products, services, and startups. Our high impact initiatives are important instruments to deploy critical mass in our Co-Location Centres in order to further focus and increase impact. Several highlights can be mentioned such as the deployment of our 3Cixty results at the Milano Expo, our Street Smart Retail results in the retail market, our Fit2Perfom first of kind product to replace the Tachograph, our SecureCloud results deployed in several Cloud infrastructures and our CPS for Smart Factories results deployed in various production environments.

Our EIT Digital Accelerator is concentrating its efforts on supporting our Action Lines in their business creation activities. The focus is on growth and scale-up in close collaboration with our partner organisations. Action Lines

are supported in their mission of bringing technology to the market via Action Line-specific business communities which have become fully operational during 2015 and are now truly acting as market places where producers of innovations meet potential buyers.

The number of 'soft-landings' helping scaleups to expand their business at a European level has gone up significantly. With the arrival of our new Head of Access to Finance, Daniel Michel, we are further strengthening our relationship with investors, amongst others, resulting in an average investment in our scaleups that went up from around €0.5 million in 2014 to around €2 million in 2015.

In 2015 we welcomed Raymond Freymann as the new Chairman of EIT Digital. Raymond succeeds Henning Kagermann who was the first Chairman of EIT Digital. We thank Henning for his contribution to EIT Digital and welcome him as honorary member of the EIT Digital alumni organisation.

During the year, EIT installed two new Knowledge and Innovation Communities (KICs); EIT Health and EIT RawMaterials, and in December, concluded the new Framework Partnership Agreement with all five KICs. For EIT Digital this represents a recognition of our achievements and a firm foundation for the further development of our organisation for the next seven years.

I want to thank partners and activity participants for sustaining our vision through your contributions to EIT Digital in 2015. When visiting our Co-Location Centres, I meet enthusiastic researchers, students, teachers, business developers, and EIT Digital staff as well as external visitors driving digital innovation and entrepreneurship. Also when attending events where we show our results I meet many of you enthusiastically being EIT Digital ambassadors and demonstrating our impact to the audiences. This makes me proud of being part of EIT Digital, once again a warm thanks to all of you.

Chahab Nastar
Chief Strategy Officer



EIT Digital's Strategy

EIT Digital is a leading European digital innovation and entrepreneurial education organisation driving Europe's digital transformation. EIT Digital delivers breakthrough digital innovations to the market and breeds entrepreneurial talent for economic growth and improved quality of life in Europe. It does this by mobilizing a pan-European ecosystem of over 130 top European corporations, SMEs, startups, universities and research institutes.

As a Knowledge and Innovation Community of the European Institute of Innovation and Technology EIT Digital is focused on entrepreneurship and at the forefront of integrating education, research and business by bringing together students, researchers, engineers, business developers and entrepreneurs. This is done in our network of Co-Location Centres in Berlin, Eindhoven, Helsinki, London, Paris, Stockholm, Trento, as well as in Budapest and Madrid.

EIT Digital invests in strategic areas to accelerate the market uptake of research-based digital technologies focusing on societal challenges strategic for Europe. EIT Digital

breeds T-shaped entrepreneurial digital talent focused on innovation through a blended Education Strategy that includes a Master School, Doctoral School and Professional School.

In order to create pan-European impact and critical mass, our investments are clustered in Action Lines - portfolios of thematic activity that we work to scale at the pan-European level and beyond.

Anders Flodström
Education Director



Entrepreneurial Education



EIT Digital stands at the forefront of human capital development in Europe, sourcing and training the entrepreneurial digital talent to drive digital innovation.

The basis of our entrepreneurial education efforts combines Education, Research and Business activities to deliver 'T-shaped' training for our students, to acquire deep technical knowledge with entrepreneurial skills. These activities breed young technical entrepreneurs and digital leaders, and keep the existing professional workforce at the forefront of digital trends.

EIT Digital has positioned itself at the forefront of European education by creating online "blended" Innovation & Entrepreneurship education to raise quality, increase diversity and availability of the top-level content provided by its university, research institute and industrial partners. EIT Digital continues to build the brand of EIT-labelled education in close collaboration with the other EIT-supported organisations, to establish it as a recognised innovative program in the European higher education landscape.

Our ambition is twofold:

- To educate a new generation of digital thought leaders, innovators, and knowledge workers by providing excellent technical programmes with deeply embedded innovation and entrepreneurship education

- To 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 through which students develop cutting-edge digital knowledge merged with innovation and entrepreneurship skills. The settings can be physical or virtual classrooms, or combinations of both.

We have three education programmes: Our Master School breeds the next generation of European digital entrepreneurs; our Doctoral School delivers tomorrow's digital leaders, and our Professional School keeps European professionals at the forefront of ever-changing digital trends.

The education programmes feature a strong pan European dimension with geographical mobility between universities and frequent team building activities, and are further enriched through interaction with innovation activities at our Co-location Centres. The programmes 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.



Innovation & Entrepreneurship

EIT Digital seeks to generate significant innovations from top European research results. Our objective is incubation, market uptake and rapid growth of these innovations.

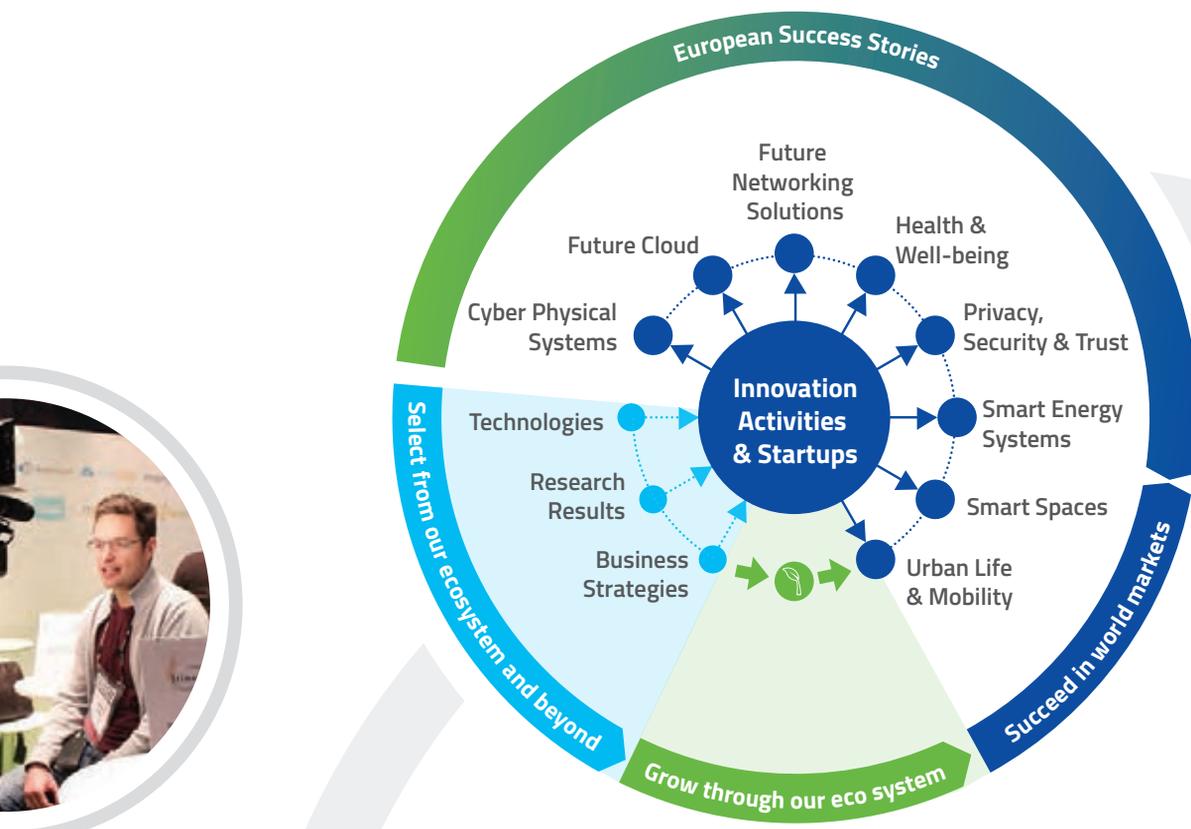
As such, we focus our investments on a limited number of innovation areas that we have selected with respect to European relevance and leadership potential – the Action Lines. Each Action Line is a portfolio of activities: on the one hand, open innovation activities carried out by the EIT Digital Partners, and on the other hand, fast-growing technology startups that are ready to scale commercially. These entrepreneurial projects are grounded in game-changing research results, high-profile technologies and disruptive business strategies.

Once the activities are selected, the EIT Digital Accelerator steps in to fully manage the innovation and entrepreneurship funnel, supporting the growth of the activities so that they become successful European products, services or ventures. In addition to

coaching the business, the Accelerator helps them with pan-European Access-to-Market (customer acquisition) and Access-to-Finance (fundraising).

In 2015, these Action Lines were: Cyber-Physical Systems, Future Cloud, Future Networking Solutions, Health & Wellbeing, Privacy Security & Trust, Smart Energy Systems, Smart Spaces, and Urban Life & Mobility.

Each Action Line co-develops entrepreneurial projects grounded in game-changing research results, high-profile technologies and disruptive business strategies. These entrepreneurial projects are integrated into the same innovation funnel.



Innovation activities enter our innovation funnel once they have been selected from proposals by partner consortia. Selection criteria are mainly sufficient technological maturity, clear market focus and excellence of the team that needs to include a defined business champion who acts as the owner of the product or service. The outcome of an activity should be a new product or service offering that is brought to market either by a business line of one of the existing partner organizations, or by creating a startup or spinoff that can act independently. In order to achieve the required focus and speed of the development, we typically use the scrum approach to project management and follow the “minimum viable product” (MVP) philosophy. In summary, we run our activities like a venture, with the clear intention of achieving a sizeable return on the investment made by EIT and our partners.

Our business accelerator sources the startups it coaches from the spinoffs and startups created in innovation activities of the Action Lines or from outside of the partner ecosystem through

competitions. Startups admitted to the portfolio need to operate in the topical areas of the Action Lines and show a clear growth potential.

By integrating the business acceleration and innovation creation activities in a joint funnel, we create an agile and dynamic network of opportunities. We stimulate the exchange between the innovation activities of our established partner companies and the startup and venture capital scene (in our Action Line oriented business communities). In our Summer Schools students get first hand and pragmatic exposure to this entrepreneurial network, creating opportunities to hire talent and for students to create their own businesses. The products and services created by our innovation activities, the startups that have been coached in the EIT Digital Business Accelerator, and also the students that passed through our education activities leave our funnel ready to succeed in the digital economy.

The EIT Digital innovation and entrepreneurship strategy is driven by Action Lines that have been chosen to respond to major digital trends and European leadership potential.

Each Action Line is steered by an Action Line Leader, a programme manager with deep subject expertise. Each Action Line helps develop and support entrepreneurial projects grounded in game-changing research results, high-profile technologies and disruptive business strategies. These entrepreneurial projects are integrated into the innovation funnel.

In collaboration with the Action Line Leaders, the integrated innovation funnel is managed by the EIT Digital Accelerator, a distributed team of business developers working out of our co-location centres. The Accelerator's mission is to scale up European digital ventures.

In addition to organising the pan-European startup contest, the Idea Challenge, the main services of the Accelerator are:

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

Idea Challenge

The Idea Challenge is EIT Digital's contest to reach out, identify and support the best startups in digital technology across Europe. It focuses on our eight Action Lines.

In 2015, over 450 submissions were received from which 73 startups were selected to compete in eight final events, which took place in different cities across Europe and attracted more than 900 visitors, including investors and industry representatives. High profile juries of external experts and investors alongside EIT Digital team members selected the best three teams in each category. Each of the 24 teams were provided with prize money up to €40,000, co-working space, coaching and mentoring from the Business Development Accelerator as well as integration into the Action Lines and access to EIT Digital's pan-European innovation network, comprising more than 130.

Compared to 2014, the eligibility requirements for the participants were raised which led to a selection of more mature startups with close to market or market ready products and services.

In addition, our efforts to encourage female entrepreneurs has also been fruitful: 30 per cent

of winners have female founders or co-founders – much more than the European average.

"EIT Digital addresses two of the most important challenges for a startup: tech recruiting and customer acquisition. We presented our startup and product to Master School students and EIT Business Developers, which led to applications for developer internships and participation in relevant networking events. We now look forward to upcoming introductions to potential customers of our simple and secure email encryption solution."

(Gaurav Singh, CEO of Mynigma, 2nd place in Cyber Security and Privacy)



Berlin Node



In 2015, EIT Digital Berlin saw a significant growth in its activities across all Action Lines and in startup support in Germany. The Berlin Node also strengthened its strong ties with industry by welcoming two new global Affiliate Partners: Huawei and Airbus.

In Berlin, EIT Digital is based at the TU Berlin campus, right in the heart of the vibrant startup quarter of the city. During the year, the EIT Digital premises were expanded to include the newly opened Charlottenburg Innovation Centre (CHIC) nearby to cater for increasing demand for work and event spaces. Besides study rooms for the EIT Digital Master School students, and office space for some of the EIT Digital team, the CHIC offices provide additional space for Street Smart Retail - one of EIT Digital's High Impact Initiatives, and a number of coached startups including qDatum Idea Challenge 2014/2015 winners 3Yourmind, Mynigma and 7Mind.

2015 highlights

The members of the Cyber-Physical Systems (CPS) High Impact Initiative worked at the EIT Digital Satellite CLC in Munich and developed several international use cases based on human-robot collaboration and Industry 4.0 technologies. Further activities of CPS included business community events with the 3D-Printing Cluster in Munich and the support of the Startup Challenge at the *formnext* international trade fair for additive manufacturing.

IT security has become a topic that concerns all businesses and sectors. In 2015, the Business Community of the Action Line Privacy Security and Trust (PST) addressed this development

and created a marketplace that connects cyber security startups and innovation buyers.

A successful example was the matchmaking event that took place at the Berlin CLC together with high-profile industry representatives and selected startups. Clearly a highlight was the international conference 'New Directions in Cyber Security' in October. Together with delegates from politics, industry and the startup world, new trends and current security developments were discussed in Berlin.

In 2015 EIT Digital participated in two international trade fairs in Germany: CeBIT and the first ever New Mobility World exhibition at the International Automobile Show IAA. The new exhibition showcased disruptive innovation impacting the automotive industry, including a range of Urban Life and Mobility startups.

In the heart of the vibrant start-up quarter of the city

Udo Bub
Node Director



Eindhoven Node

The Eindhoven Node is fast becoming a leader for new approaches in entrepreneurial education and innovation in the Netherlands. The Co-location Centre has become a hub for numerous innovation activities, leading to a hands-on, result-driven and people-centric approach to innovation.

In 2015, the Eindhoven Node welcomed two new affiliated partners: Bosch Security Systems and TomTom joining our good mix of 13 existing partners with top corporations, research centres and universities in the Netherlands.

The Co-location Centre in Eindhoven is situated at the High Tech Campus Eindhoven, a high-tech industrial R&D area. High Tech Campus Eindhoven is the smartest km² in Netherlands with more than 140 companies and institutes and some 10,000 researchers, developers and entrepreneurs who work on future technologies and products. The Campus helps to accelerate your innovation thanks to access to high-tech facilities and an international network.

2015 highlights

The number of staff and resident numbers at the Co-location Centre increase during the year. The Node also continued to take a lead role in a number of events, including strong participation in the Health Tech Event and Innovation Day both with more than 250 participants and the success of the Investor's Dinner where 14 investors met 16 startups from the Netherlands and Belgium.

The Eindhoven Node has become an attractive centre for Health & Wellbeing activities with a strong footprint with Fit-to-Perform, a High Impact Initiative, where a cluster of our

partners is working at the Co-location Centre on a daily basis, but also a consolidation of its portfolio in the Health Tech event and the Summer School of the Health and Wellbeing Innovation Action Line.

The Dutch Node extended its education footprint provided by increased participation in the Master School, through the new entrepreneurial Data Science Master, a strong role in Online Education (blended learning and MOOCs) and Professional School. It has also been successful in providing business cases and internships from the industrial partners to Master School students, as an example that the now established Education-Research-Business integration works.

The Eindhoven Node established an international business-coaching infrastructure to support ICT spin-offs and SMEs. The organisational structure and European network provided a soft landing for international business development from our Co-location Centre. New in 2015, were two successful launches of two EIT Digital supported startups; Tinnitracks and Wellmo in the Netherlands.

Patrick Essers
Node Director



Helsinki Node



In 2015 the Helsinki Node led two of the eight Action Lines: Future Cloud and Smart Spaces. There is a growing interest especially amongst the private sector to apply for EIT Digital membership. Tieto, the leading Nordic software and services company, joined in June and several other companies are in the process of becoming affiliate members.

Co-Location Centre (CLC) usage in our premises the Innovation House on Otaniemi campus has increased to approximately 70 people each day due to a new team engaged in the High Impact Initiative ACTIVE - Advanced Connectivity Platform for vertical segments, led by Ericsson. The project advances the market uptake of Internet of Things applications by creating a generic connectivity and middle-ware platform including security to support application developers for different segments. In addition, the CLC hosts Master and Doctoral school students, events, call clinics, visits and lunch talks. Our Co-location Centre is also home to 12 of our supported startups at any one time.

2015 highlights

EIT Digital : Helsinki Node has systematically built a dynamic and diverse local ecosystem that is recognised as a global innovation hot-spot. We have continued to support international startup event, Slush, that has grown to become one of the biggest of its kind. We have hosted three Google affiliated events - Google NewsGeist, Innovation Jam, and Launch Pad - in collaboration with Espoo City. We are creating links with startup hubs outside of Europe e.g. Tel Aviv and Singapore.

As a result of our Business Development acceleration two Helsinki Node coached startups have received a total of €3 million in

funding. Health and Wellbeing, Smart Spaces and Future Cloud Business Communities have generated altogether 380 leads, 37 deals and €11 million in startup funding.

The Helsinki Node is influencing the national ICT agenda through regular discussion the Ministry of Employment and the Economy. We have established links to two Finnish Members of European Parliament, Henna Virkkunen and Nils Torvalds. We are participating in the Industrial Internet related national spearhead programme led by former EIT Digital CSO, prof. Martti Mäntylä.

EIT Helsinki has in 2015 developed alternative sources of income at national level. We have three non-EIT funded projects on-going, we are preparing joint projects with national funding agency Tekes for the next call and trying to implement success fee based schemes to some of the existing instruments.

“EIT Digital has been a useful instrument for advancing F-Secure strategy. In practice it has supported in F-Secure cloud transformation that has led to a positive exit selling F-Secure yonited business line for \$60M. Our current strategic focus is on cyber security where we expect more success stories including via the European Trusted Cloud initiative.”

Christian Fredrikson
CEO, F-Secure Corporation

Tatu Koljonen
Node Director



London Node

The London Node links EIT Digital with the thriving tech and business environment here in the UK's capital city. Our Co-location Centre is housed in the emerging Imperial College "White City Campus" development and, with partners including Edinburgh University, our impact is increasingly apparent across the UK. The Node partnership also includes BT, Digital Catapult, IBM, Intel, University College London and Vodafone – all innovation leaders on the global stage.

London is a unique city that has secured a reputation over recent years as a leading centre for entrepreneurship in technology, finance, health, and smart city topics. EIT Digital's London Node is increasingly engaged with the community of investors, accelerators, incubators, and activities that drive London's success. As a member of the Mayor of London's Smart London Board, and in collaboration with a range of leading UK stakeholder organisations, the London Node is helping to shape the UK's innovation landscape.

2015 highlights

2015 represented London's second year as a full EIT Digital Node. As such, our focus this year was centred on capacity building and increasing our impact. We have built a team of four Business Developers, each with extensive entrepreneurial and business experience, who work with our supported startup companies. The team also includes leads for our access to finance work and for our communication activities.

Working together, the London Node team is making a tremendous impact bringing EIT Digital initiatives to the UK co-hosting more than a dozen external conferences and pitch

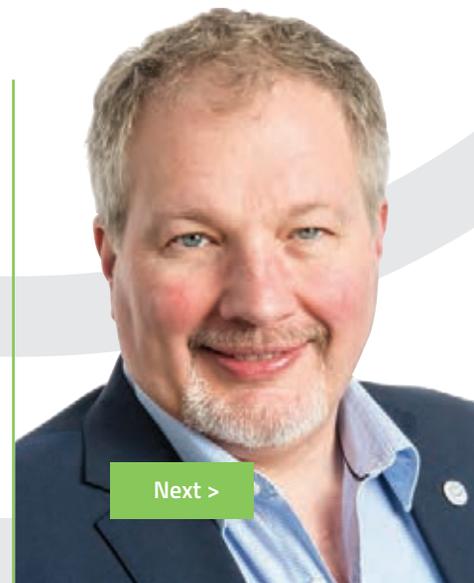
events with a range of partners to raise the profile of our innovation activity and supported startups.

In terms of physical capacity, the London Co-Location Centre increased in size by 183% in 2015. Much of this additional space has been dedicated to our coached startups. We now provide over 25 seats for coached companies and the Node has become a vibrant centre for entrepreneurial activity receiving hundreds of visitors and hosting more than 40 events during the year.

The Co-Location Centre also houses the London activities of two EIT Digital High Impact Initiative teams working on topics in our Health and Wellbeing and Future Cloud Action Lines. With contributions from Imperial College and UCL, the "Fit to Perform" team is developing "quantified self" technology for high stress occupations. And bringing together BT and the Digital Catapult, the "Trusted Cloud Ecosystem" team is building world-class components for safe and secure cloud computing infrastructures.

the London Co-Location Centre increased in size by 183% in 2015

Dennis Moynihan
Node Director



Paris Node

In 2015, the Paris Node consolidated its strategy to leverage national and regional initiatives at European level, creating a French ecosystem of digital innovation.

The Paris Node is composed of 22 partners (seven academics, three research centres, four clusters, four large industrial companies and four startups) capitalising on the three main innovation areas of the digital sector in France (Paris, Brittany and PACA regions) and has two satellite locations; Rennes and Sophia Antipolis in addition to Paris.

The Paris Co-location Centre, located near Inria, Pierre & Marie Curie University and Mines Telecom Institute premises, has grown to 600 square metres at the end of 2015. The Rennes satellite is located within Rennes 1 University campus. The Sophia-Antipolis satellite centre is inside the new Techno Park, together with the Nice Sophia-Antipolis University and Eurecom Institute.

Paris, Rennes and Sophia-Antipolis centres have hosted around 600 meetings in 2015, gathering more than 3000 participants, giving EIT Digital activities strong visibility within the regional and national innovation ecosystem.

2015 highlights

During the year, the Paris Node and partners have been particularly active across all eight Action Lines with particular emphasis on Urban Life and Mobility and Cyber Physical Systems. Activity represents EIT funding of €3.5 million, backed-up by €11.5 million from partners. In terms of business development and access to finance we saw a strong increase with 20 startups supported by the EIT Digital Accelerator in France in 2015. The Access to Finance service

was at the origin of a fund leverage of almost €8.5 million in 2015 for the start-up VULog, that spun-off from Inria in 2006 and is now present in Europe and North America.

In 2015, the Master School counted 89 students across the five French partner universities (Mines Telecom Institute, Nice Sophia-Antipolis University, Pierre & Marie Curie University, Paris Sud University and Rennes 1 University). These universities have also welcomed 33 Doctoral School students, representing the largest cohort in EIT Digital.

The closing event of the year was the Paris Node Results Day on December 7, which included the Cyber-Physical Systems Idea Challenge final. This event demonstrated the potential of the EIT Digital French ecosystem in the context of the Digital Transformation of the Industry (also known as Industrie 4.0).

... 22 partners (seven academies, three research centres, four clusters, four large industrial companies and four start-ups)

Stéphane Amarger
Node Director



Stockholm Node

The Stockholm CLC is located in the Electrum building in Kista Science City, the most innovative and ICT-dense area in Sweden. Most of the partners are located within the building or within a few minutes walking distance.

The Stockholm Node has further expanded its activities during 2015 and continues to coordinate the Master School and the Future Networking Solutions Action Line. In October, the Future Networking Solutions action line's High Impact Initiative ACTIVE – Advanced Connectivity Platform for Vertical Segments, focusing on Internet of Things, had an early bird start. The Co-Location Centre hosts the ACTIVE team and so needed to expand.

2015 highlights

The Master School has continued scaling up the number of students and KTH, the Royal Institute of Technology, continues to be an attractive location for Master School students within the EIT Digital programme.

The Co-location Centre boosted its activities both in terms of events and participations in meetings, visits, seminars; in total we've hosted over 5000 participants at organised meetings, seminars and events during the year.

The master student presence has increased, also during evenings and weekends, and the students also arrange their own student-driven professional events in the CLC. The Summer Schools for Internet of Things (within FNS), Cloud and Cyber-Physical Systems were all three successfully hosted in Stockholm.

The successful startup course developed by STING for the Stockholm Node was successfully repeated with 18 potential business cases,

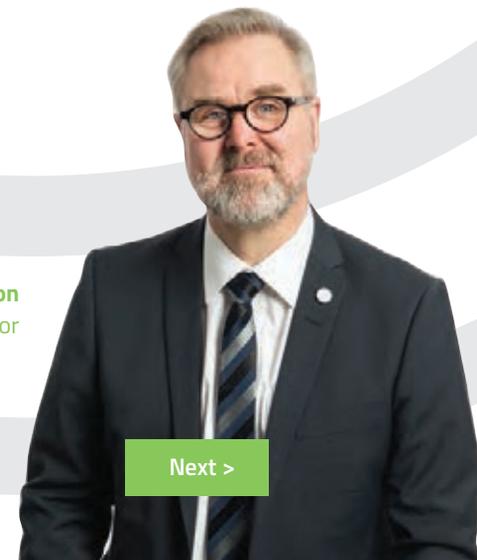
represented by two to four people per case. This year more than 50 percent of the participants were female and from five different continents.

In order to reach out to political, business, SME and entrepreneurial communities of the local innovation ecosystem the Node co-organised events together with local partners: STING Day, Johannesburg Summit, Cloudberry Day, SICS Software week and Digital Health Days. In 2015 for the first time these included also the "Almedalen" week, the major national political and business event resulting in new industrial contacts and brand awareness.

The major event of the year was the two-day, joint arrangement of the "Stockholm Innovation Days", the Internet of Things Idea Challenge final and the Future Networking Solutions dissemination workshop. The event filled the Electrum building and included seminars, panel discussions and 38 demonstrations by the Node's startups and innovation activities.

*we've hosted over
5000 participants at
organised meetings*

Göran Olofsson
Node Director



Trento Node

products and services and interact with journalists, institutions and potential clients.

Our Business Developers have supported Italian and European partners through the so-called Proposals Clinics in preparing sound proposals, facilitating match-making with market actors and startups, extending the coached companies corral. We have facilitated interactions among our students and our partners to find good theses, get engaged in innovation activities and participate to the excitement of startups. The work paid off: Trento has ranked first in both proposal submissions and selection for the 2016 business plan.

On the third objective we had frequent interactions with local and national institutions that are now supporting us in several ways and have found in EIT Digital a worthy partner in the national innovation plan. We have had continuous support for the San Francisco Hub where three people from Italy have worked in 2015, and the National Research Programme 2014-20 has a specific allocated fund for EIT-related activities.

Trento has ranked first in both proposal submissions and selection for the 2016 business plan

EIT Digital is present in Italy through the Trento Node and the Milan satellite. The Co-location Centre is located in Povo, on the outskirts of Trento, an area bristling with innovative companies, sometimes referred to as the Semantic Valley for its focus on data semantics. The satellite is located in the CEFRIEL premises on the Milan Politecnico campus.

The Italian partnership is comprised of the core partners Engineering, FBK, Telecom Italia and Università di Trento plus affiliated partners including Universities, Innovation Centres and Industries. The partnership is very active in all Action Lines although with a stronger involvement in Future Networking Solutions, Privacy, Security and Trust, and Smart Spaces.

The participation in the activities leverages on a strong connection with the territory and specifically with the Province of Trento with cooperation on local innovation projects and the availability of a receptive marketplace that becomes a living lab for trials.

2015 highlights

There has been an increase in space at the Co-location Centre to provide a dedicated area for the Doctoral Training Centre, more space to our hosted coached companies, and better working and demo areas to the hosted High Impact Initiatives, Smart Street Retail. The Milan satellite has also made some adjustment to provide a more comfortable environment for hosted startups and activities, with a specific focus on 3cixty, a platform enabling third parties an effective way to create applications exploiting cities' open data. They provided the EIT Digital community a launching pad to leverage the EXPO 2015 in Milan, enabling many of our Action Lines to present their

Roberto Saracco
Node Director



APG Budapest

The EIT Digital Budapest Associate Partner Group's (BAPG) mission is to give a boost to the development of an innovative ICT ecosystem in Hungary and in Central and Eastern Europe. The consortium is composed of two local universities, Budapest University of Technology and Economics (BME) and Eötvös Loránd University (ELTE) and their industrial partners playing a leading role in the field of informatics and telecommunications: Ericsson Hungary and Magyar Telekom. In relation to specific fields of EIT Digital, such as the Master and Doctoral education or innovation activities, we have built strategic partnerships with other Hungarian IT companies like Nokia Networks and ELTE-Soft, academic research institutes like SZTAKI, and fast-growing Hungarian SMEs as well.

2015 highlights

In 2015, over 40 events with more than 1600 participants were organised or hosted by the Budapest team with the goal of increasing EIT Digital's visibility and brand awareness both in Budapest and throughout the central and eastern European region. The local team was heavily involved in the InnovEIT 2015 conference where nearly 600 entrepreneurs, researchers, policy makers, business leaders and students from across Europe participated in May as well as in the ITU Telecom World Congress in October, which was attended by over 4,000 visitors from 129 countries.

In November, at the second graduation ceremony of the EIT Digital Master School nearly 250 participants – and among them more than 100 graduates from nearly 30 countries – gathered at ELTE in Budapest.

The Budapest Doctoral Training Centre, established in 2013, currently has 21 PhD

students. To provide them a dedicated place of their own, where they can cooperate with the whole EIT Digital community both locally and internationally a dedicated DTC Lab was created. It offers a real co-working space for the students in the Budapest CLC, making sure that they spend even more time in the office, and to encourage them to get involved in the local research projects. The Lab was officially opened on February 20, 2015.

In 2015 the Budapest APG took a new role in connection with the ARISE Europe Programme. One of the big events was EIT Digital's end-of-year ARISE Europe pitching event that took place in December at ELTE. The event featured startups from the six partner innovation centres of EIT Digital's ARISE Europe programme, keynotes by world-known startup trainers and speed networking with some of Europe's best startup accelerator programmes.

Over 40 events with more than 1600 participants

Zoltán Horváth
Director



APG Madrid

The Madrid APG of EIT Digital leverages the large potential of the Spanish ICT innovation ecosystem and market by bringing on board leading actors in ICT entrepreneurship, research, and education. The Madrid APG is coordinated by the IMDEA Software Institute, and includes the Technical University of Madrid (UPM), Telefonica, Indra, and Atos. The APG focuses its activities on the development of the ICT innovation ecosystem in Spain in all three dimensions of the innovation triangle, and is supported by the Madrid Co-location Centre (CLC), which hosts a wide range of innovation, research, education, and entrepreneurship activities through its excellent infrastructure and facilities. It is located in the new building of the IMDEA Software Institute, within UPM's Montegancedo Science and Technology Park.

The Madrid APG and CLC have significantly expanded in 2015 in terms of activities, including additional Business Development Accelerator (BDA) coaches, more startups, Master and Doctoral students, events and presentations, and cooperation initiatives with the Public Administration.

2015 highlights

While 2014 was devoted to launching the EIT Digital activities in all three levels: Innovation Activities with international consortia, Doctoral and Master School set up, and Business Development activities, during 2015 we have doubled business acceleration activity, began providing Access to Finance services, coached five companies and hosted three of them in the CLC, and fully deployed education activities both in Master and Doctoral programmes with students hosted in the CLC premises, which have been further expanded again.

Selected highlights for 2015:

- The first year students for the EIT Digital Master School in the Data Science major and the first Doctoral students joined our programme
- Set up collaboration agreements with innovation leaders outside the APG in the ICT field, such as Endesa, Everis, Ferrovial, Microsoft and ScytI at the Spanish CxO level
- Contacted and established collaboration agreements with more than 20 venture capital and investing bodies of the Spanish ecosystem
- Consolidated our role in Europe ARISE activities covering Portugal as potential input of innovative startups into Business Accelerator coaching programme, with active cooperation with local accelerators
- The Spanish public administration recognised the importance of the EIT Digital support, granting related activities with additional funds for 2015 and 2016.

Collaboration agreements with more than 20 venture capital and investment bodies

Manuel Hermenegildo
Director



Arise



Beyond our nine Co-Location Centres and APGs, during 2015, we have extended our links with the wider EU-28 through our selection of digital innovation centres to further extend our reach and spread the benefits of our innovation and education ecosystem.

Working through the network developed by our ARISE Europe programme, we are helping to:

- improve the services offered to their own ecosystem and boost the acceleration of their most promising scale-ups, by leveraging the support of EIT Digital's experts - business developers, access to finance experts, business communities
- extend and strengthen their ecosystem through joint activities aimed at mobilising, attracting and involving new stakeholders
- gain higher visibility at the European level
- be fully empowered thanks to a strong co-funding mechanism of joint activities.

2015 highlights

In order to connect to the best innovation centres, ARISE Europe launched an open call in May 2015. After an intensive campaign, the call received 43 applications from 14 different countries. Six partners have now been selected. An important element of the latter is a strong co-financing scheme by which each selected innovation centre committed to co-fund a significant portion of the costs of the agreed joint activities.

The activities executed in 2015, and results include:

- 14 co-branded events, aimed to raise awareness – innovation centres cooperation, which attracted more than 600 local and national stakeholders

(corporates, startups and scaleups, public bodies and utilities, universities, etc.) across the involved countries.

- the joint scouting and selection of the best local scaleups to include in EIT Digital's innovation funnel. More than 90 startups were brought to the attention of EIT Digital's Business Development Accelerator and Access to Finance team by the partnering Innovation Centres. Out of them, eight were invited to pitch in front of our Business Development and Access to Finance teams and five were finally selected for support from EIT Digital.

Eva Maurina Inits:

"[For startups] the next step is how they scale, how they enter new markets. And there we see that the network of EIT Digital, access to the corporations, is really what our B2B or B2B2C startups need in order to enter the market in an efficient way."



Fabio Pianesi
Research Director

Silicon Valley Hub

Establishment of the Silicon Valley Hub has been a significant step in implementing the global outreach ambition of EIT Digital. The goal of the Silicon Valley Hub is to enhance two-way mobility of talent, provide opportunities for collaboration on research and innovation initiatives, and provide support for growth of businesses across USA and Europe.

In 2015, we built the core operational team and selected RocketSpace - a well-known accelerator located in San Francisco - as our base to launch the US activities. Our Hub facilities have been shared by the core team, startups, researchers working on EIT activities, and European visitors that have used the Silicon Valley Hub as their temporary working space. We have also received several distinguished visitor groups, including Members of European Parliament, Mayor of Eindhoven and his delegation, National Institute of Information and Communications Technology (NICT) from Japan, SIEMENS Senior Executives Delegation, and Association of Young C-level Executives from Finland.

2015 highlights

We made a significant progress in engaging "Europe as One" aiming to connect to the national efforts of trade and scientific missions, accelerator programmes of different member states in the area, and participate actively in promoting Europe as a whole. By connecting and complementing the national efforts we aim to provide more value for everyone. The largest event to achieve these goals was Startup Europe comes to Silicon Valley (SEC2SV), which brought together EU policy makers, startups, European scaleups and corporations to meet Silicon Valley stakeholders. The event promoted European scaleups and fostered policy dialogue around innovation and entrepreneurship. EIT Digital was one of the key partners.

Our efforts to stimulate joint strategic research-to-innovation initiatives resulted in the launch of the trans-atlantic federated Software Defined Networking (SDN) testbed and certification activity led by EIT Digital. We have gathered a string group of industry actors, with primary contributions from Deutsche Telekom and Telecom Italia. Testbed will provide a neutral and open environment for developers of future networking technologies focusing on SDN to verify the functionality of their solutions.

Our business development efforts have helped twenty startups of the EIT Digital Accelerator program with their plans to access the US market, or to get financing from the US. We have also started building relationships with local accelerators including RocketSpace, 500 Startups, and Galvanize.

In 2016, the ambition of the Silicon Valley Hub is to significantly grow the volume and impact of our activities and also to build a strong industry engagement programme with US-based actors.

Marko Turpeinen
Silicon Valley
Hub Director



Entrepreneurial Education

Europe is facing great societal challenges and needs to educate students with both excellent basic knowledge in their field but also with the capability to transform ideas into products and services, from the labs to the marketplace, from being students to becoming entrepreneurs.

In 2015 EIT Digital, on behalf of EIT took the lead in revising the EIT label Handbook; the basis for the EIT label brand for future challenges. The T-shaped Masters and Doctors now rest on a solid quality framework. In 2016, we will see the EIT label brand extended to educational activities including summer schools, and professional and online learning programmes. This first pan European quality system will then be established covering the full breadth of higher education. the first doctoral students graduated from the EIT Digital Doctoral School (DSL).

In 2015, EIT Digital certified 200 professional learners from private and not for profit organisations. This was done through 10 professional learning modules provided by partners, from academy and research institutes at iMinds, TNO and Fraunhofer. The professional learning modules are all in a blended format and will in 2016 also be available by mobile devices. In 2015, the Professional School (PSL) has built up unique competences (learning design, media and learning analytics) in online delivery in blended and MOOC formats. As a result the PSL builds its added value on transforming content from areas such as Data Science, Digital architectures, Security and Privacy and Health into online formats and on the EIT Digital possibility to offer European marketing through CLCs. In 2015, professional learning modules also attracted paying students and revenues were made by our partners. In 2016, a full business model will be launched and a revenue sharing between partners and Us will result in incomes that aim to make the PSL self-sustaining.

In 2015 the online development of programmes and modules has continued. The work is lead from the TU/e and UPMC partners. Many other partners participate in the production. Some of the concrete results are: An Internet of Things MOOC for the Embedded Systems master programme is under development. In 2015 the first students participated in pilot runs and 400 students have done some serious work. In 2015, 20-blended format I&E modules were produced, eight online assignments for the summer school was a success with a high student rating and finally a fully blended format PSL was launched.

In 2015 the first students have participated in pilot runs and 400 students have done some serious work





Master School

The EIT Digital Master School is an exclusive joint initiative by the 20 leading technical universities and business schools in Europe with additional mentoring and partnering from excellent European research organisations and leading business partners. Graduates of this master's education will be prepared to face the challenges of their future career as well as the global challenges of the society. Students gain state of the art technical knowledge and achieve the ability needed to drive your innovations to the market. The education focuses strongly on the acquisition of transferable skills, especially in innovation and entrepreneurship.

The EIT Digital Master School is a two-year EIT-labelled programme at advanced level leading to a double Masters degree (moving between partner universities in two countries), including a mandatory and standardised Innovation & Entrepreneurship (I&E) minor, which has now been launched as an online blended module. The Master School provides all students, with a strong industrial connection, the utilisation of EIT Digital Co-location Centre resources and facilitates interdisciplinary, inter-Node team building amongst the students.

The Master School students were from the start distributed across seven programmes: Human Computer Interaction and Design, Digital Media Technology, Service Design and Engineering, Cloud Computing and Services, Internet Technology and Architecture, Embedded Systems, and Security and Privacy. In 2015, a new successful programme, in Data Science was launched. Twenty universities in nine countries contribute to the implementation of the programmes.

Since its start in 2012, the EIT Digital Master School has managed to build a strong brand. The number of new registered students has grown from 90 in 2012 to 290 in 2015. The building of the brand is substantiated by the steep increase in applicants from outside of Europe (from 500 in 2012 to 1,500 in 2015).

Twenty universities in nine countries contribute to the implementation of the programme

CASE STUDY: SongArc

The most popular music game app in the Windows Phone Store, SongArc, has been developed by the Hungarian Ádám Kapos, an EIT Digital Master School student at the Faculty of Informatics, ELTE. The app was downloaded more than one million times since its launch and it has received praising feedback. The chief designer of the app, Ádám Kapos received a Software Development BSc Degree from Eötvös Loránd University (ELTE). He started as an EIT Digital Master School student at Aalto University in Helsinki where he got acquainted with developing mobile phone game apps, and finalised his second year back at ELTE.

“The EIT Digital Master School boosted the development of the music game app

considerably, I got a high-level education both in service design and engineering as well as in business development from the best experts of Finland. It was particularly appealing for me that I could study at Aalto University, because Finland has a vibrant start-up scene.” Ádám Kapos started studying game development at the ELTE Faculty of Informatics and his first app, RumRun was awarded 3rd price on Microsoft Imagine Cup in Australia, as a member of the Turtle Games team. Turtle Games has created the SongArc programme together with András Velvárt and it was finalised with the support of the Finnish app accelerator AppCampus.

The students come from more than 50 countries and have bachelor backgrounds in computer science, electrical engineering, and computer engineering. The Master School strives for a balance between EU and non-EU students and the average for the first three cohorts is in the range of 35 and 40 percent. The share of female students is in the range of 20 to 30 percent. In addition to a suitable academic background, many students have serious work experience and a clear entrepreneurial spirit. The study results are excellent (90 percent retention ratio) and only a handful of students have left the programme for study-related reasons. Eighty percent of the students in the first two cohorts completed their double degrees and obtained the EIT Label certificate. The first two cohorts' average appreciation of their studies is 4 on a scale from 1 (poor) to 5 (excellent).

During the summer of 2015, all students of the 2014 cohort attended a two-week Summer School organised in collaboration between the Master School and the eight Action Lines taking place in London, Eindhoven, Trento, Stockholm, Helsinki, and Karlsruhe. This cross-fertilization between the Master School and the Action Lines has become a great success. The kick-off

for the 2015 cohort of students in Eindhoven was also very successful. During three days 290 students plus staff gathered and got a kick start on business modelling. In the end of November, 100 students of the 2013 cohort were awarded the EIT Label Certificate at our second Graduation Ceremony in Paris. After the graduation ceremony another 45 master students have graduated in 2015 and will appear in next years ceremony.



Alumni

The Alumni Foundation was set up in 2014, and has created a vibrant, active and successful EIT Digital network for graduated students. The Foundation organises meet-ups, maintains an active community and discussion forum, keeps track of alumni careers and supports students and alumni to get in contact with a diverse range of potential employers. The Foundation also aims to provide guidance and mentoring for both current students and alumni.

In May the Alumni participated in the second EIT Alumni Connect, part of the InnovEIT event coordinated by EIT in collaboration with the different KICs. In order to help the alumni at the event to connect with people of their interest, EIT Digital Alumni developed a mobile application where users could browse the profiles of other attendees and chat with them to coordinate meetings.

In November the first cross-KIC Alumni organised event, called Startup Days, had more than 170 participants, in 5 cities simultaneously: Berlin, Stockholm, Paris, Amsterdam and Barcelona. The topic of this event was how technology can be used to solve sustainability issues. By coaching and explaining basic business concepts, we showcased the knowledge in innovation and entrepreneurship of EIT Digital students and alumni to external participants (including other KICs and people that was not related with EIT). The multidisciplinary teams came up with business ideas, developed a business plan and pitched it to the jury in less than 50 hours. There was a winning team in each location. Prizes ranged from entrepreneurship books to

private coaching sessions and working spaces at European incubators.

This international event was an initiative pushed by alumni members from the three KICs: EIT Digital, EIT Climate-KIC and EIT InnoEnergy. This group of alumni self-organized to get sponsorship from the EIT and the KICs, find hosting companies for the events in each location, get mentors and jury members to collaborate with the event, build local teams to run the event smoothly, manage the promotion of the event, sell tickets, etc. It was a huge amount of volunteering work that showcased genuine entrepreneurial spirit. From the total of participants, one third were students and alumni from EIT Digital, a great success given that it's the youngest alumni community between the three KICs.

In 2015 we achieved the followings:

- Recruited collaborators to be our "Local Representatives" in Madrid, Trento, Budapest, Berlin, Eindhoven, London, Stockholm and Helsinki
- Board members of the foundation welcomed the new Master School students during the Kick-Off event 2015 and coached them on their entrepreneurial challenge projects
- Two representatives of the alumni participated in the Partner Event 2015 in Trento
- More than 80 alumni members participated on the Annual Alumni Meeting
- A governing board meeting was held in Amsterdam

Summer Schools

Summer Schools are prominent events in EIT Digital's entrepreneurship and innovation programme as they provide meeting places for students, researchers and business people, they offer opportunities to get inspired and learn about the latest in digital technology developments. The Summer Schools have a strong Innovation & Entrepreneurship component taught through practical exercises with the emphasis on learning-by-doing. Summer Schools are mandatory for EIT Digital Master School students, but upon availability applications are also open for other students who are not enrolled in any of educational programmes offered by EIT Digital.

2015 highlights

In 2015, 366 students from 43 countries from all over the world participated on the Summer Schools organised by EIT Digital Master School. 60 % of the participants came from our Master School students, and nearly 10% of the external students arrived from any of the ARISE countries.

There were eight summer schools organised during the summer of 2015 being located in or near the co-locations at Stockholm, Helsinki, Eindhoven, Trento, London and Karlsruhe. Each summer school did cover a theme from one of the action lines, such as "Big Data Analytics" for Future Cloud with prominent speakers such as Jeff Ullman (Stanford) and Anders Arpteg (Spotify), and "Smart Retail Services" for the action line on Smart Spaces, with business cases on privacy issues in smart buildings and on digital marketing, provided by the EIT Digital partner network (e.g. Nokia).

Being instructed by keynote speakers and business coaches, students work in groups of seven to eight students for two full weeks on the business cases. At the last day the groups pitch in front of a business panel. The winning team of the Health and Wellbeing summer school came up with a smart chair that gives feedback on wrong posture; the winning team of the Urban Living and Mobility school presented a smart parking service; the winning team of the Smart Energy Systems school devised a energy management system for apartment buildings; the winning team for Smart Spaces provided a wireless locking solution for AirBnB hosts; the winning team for Privacy, Security and Trust came up with a fast emergency calling service and the winning team for Future Networking Solutions innovated an alert system on smog levels in playgrounds and parks. The winning teams of all schools were invited to the Kick Off to give their pitch presentation and some of the groups still work on their case through the second year of their master studies.



Doctoral School



Maurizio Gabrielli

Head of Doctoral School

EIT Digital's Doctoral School mission is to educate tomorrow's leaders and innovators in digital technologies by combining excellent technical programmes with Innovation & Entrepreneurship education. This combination of academic and industrial education, offered at European level, is the distinguishing feature of our school and provides an added value to our graduates: a deep technical mastering of new digital technologies, combined with strong problem solving skills, and the ability to turn them into business opportunities. Students without a PhD level education today lack such a deep mastering of technologies. On the other hand, graduates from more traditional PhD programmes often lack the skills needed to turn technology into business.

2015 highlights

EIT Digital Doctoral School's technical programme is carried out at the 18 partner universities in Europe. A unique feature is the presence of the Doctoral Training Centres (DTCs) where the Innovation and Entrepreneurship education is carried out. These provide geographic and thematic focus, aiming to create a critical mass of doctoral candidates and their supervisors in a single place, near the EIT Digital Co-Location Centres, around a few single themes or technologies and surrounded by an ecosystem of involved industries. In 2015, we opened two additional DTCs in Madrid and in Sophia-Antipolis to the existing five in Budapest, Helsinki, Paris, Rennes and Trento. We were very pleased that the that our very

first EIT Digital Doctoral Student graduated in November. By the end of the year over 110 PhD candidates were enrolled in the programme, 63 percent from Europe; 21 percent of them are female PhD candidates. In 2016 we expect a few more students to graduate but also 22 more candidates are waiting to be accepted.

"Huawei's European Research Center (ERC) aims to become a key technology player in the European ecosystem. In execution of this mission, Huawei is building new and innovative technologies in collaboration with its customers. The scope of the EIT Digital Doctoral School of providing innovation-related education is important for both Huawei and for the innovation agenda of the EC. Through the EIT Digital education our Doctoral candidate acquired valuable skills for managing and driving innovation which contribute well to our day-to-day business of creating advanced technologies and establishing new partnerships for joint innovation with European customers."

Dr. Goetz Philip Brasche (CTO IT R&D Division/
Director Central Software Institute Europe)





Frank Gielen

Head of Professional School

Professional School

The EIT Digital Professional School brings digital innovations to the market and supports the digital transformation of companies and organizations by creating a learning ecosystem. Its initiative is powered by continuing education courses, specially designed to provide critical digital knowledge, insights and skills to European professionals and executives, leveraging the EIT Digital Action Lines and partners' research activities.

Its mission is to raise the digital skills and competency level of Europe's professionals, especially in the key areas covered by the EIT Digital Action Lines. The EIT Digital Professional School offers a portfolio of cutting-edge blended learning courses designed to meet the professional development needs of experts and managers.

The Challenges addressed by EIT Digital: The digital transformation requires constant technology updates in various fields. Also, the convolution of different digital technologies requires integrated knowledge in application domains currently not delivered by generic programmes (e.g. systems knowledge for architects in urban development where telecommunications, citizen engagement, mobility and environmental sustainability come together). But today's professionals have only limited flexibility in their schedules and continuing education often makes it only on the lower levels of the priority list. Intensive programmes that require a very significant time investment with limited flexibility do not

match their needs. Instead, suitable education programmes will need to be wrapped around the existing commitments.

2015 highlights

Together with its partners, EIT Digital has developed and operates blended education courses that optimally match the needs of busy professionals and their employers, combining online elements that can be followed asynchronously whenever a suitable amount of time becomes available with focused presence modules that offer opportunities for collecting hands-on experience. Both online as well as presence modules can incorporate peer education elements. EIT Digital provides relevant training courses independently certified, documenting successful course participation.

The partners participating in the Professional School Initiative in 2015 were three research organisations (iMinds (BE), TNO (NE) and Fraunhofer (GER)) and three universities (Aalto (FI), Trento (IT) and Imperial College London (UK)).

During 2015 a total of 14 new blended courses on relevant topics related to the EIT Digital action lines were developed.

cutting-edge blended learning courses

Blended Learning

EIT Digital has been offering blended courses to combine the best of two worlds: online and face-to-face education. The online education activity supports the Master, Doctoral, and Professional School to set up blended education as its central learning management system (<https://update.eitdigital.eu>). The activity also seeks cooperation with other Knowledge and Innovation Communities to jointly create open online courses. Additionally, in cooperation with Coursera a blended Master Programme in Embedded Systems is developed with a first half year completely online. This provides a unique opportunity to market the Embedded Systems Master Programme and to recruit students for the Master School in general.

... unique active learners have grown from 322 in 2014 to 877 in 2015

2015 highlights

The online activity has successfully delivered its content to all the students of the Master School in the pre-assignments of the Master School kick-off and the Summer Schools. Similarly for the Doctoral School and the Professional School many learners have joined the blended courses.

The number of unique active learners at our central LMS has grown from 322 in 2014 to 877 in 2015. And this number will be growing. The portfolio of Master courses in Innovation and Entrepreneurship has increased and is covering almost all learning outcomes of the EIT handbook. For the Doctoral School a considerable part is covered as well.

The first Blended Masters in Embedded Systems has started and attracted in the first two months more than 1000 students. This course was also used for a new flipped classroom approach at the 3TU in the Netherlands.



Cyber-Physical Systems

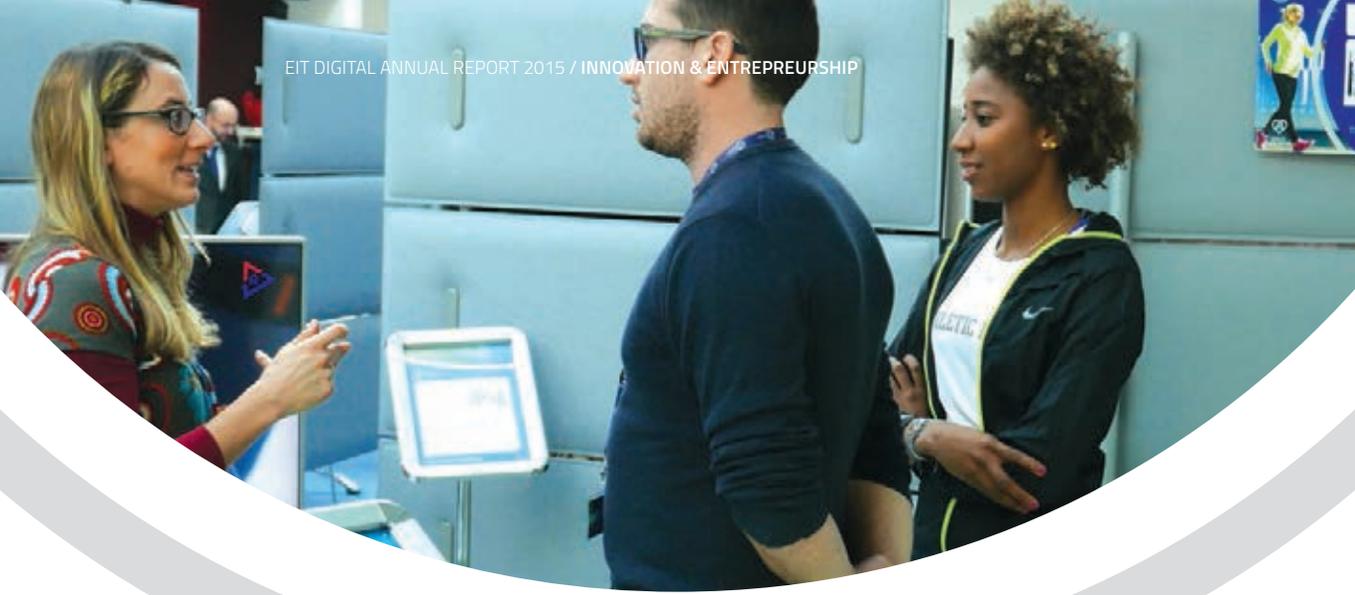
In 2015 an emphasis was put on smart production recognising the importance of manufacturing for the European economy and the need to improve production system efficiency and robustness.

In 2015, the Cyber-Physical Systems (CPS) Action Line has collected the fruits of the strategy implemented since 2014 and has created tangible value; one startup has been created, and at least two will be created in 2016 as a direct result of 2015 activities. Other tangible results from 2015 activities are three knowledge adoptions by EIT Digital partners, nine knowledge transfers from academic partners or SMEs to large corporates, nine innovations have reached the targeted innovation delta, seven business models have been refined and applied, five business ideas have been incubated and one new product has been developed.

Mainly through its focus on smart production, the CPS Action Line has seen cross-European collaboration. All of the seven nodes and one associated partnership were involved in CPS activity during the year with a total of 29 partners engaged across Europe.

Integrated Information Engineering activity within the Action Line has helped to stimulate the local innovation eco-system and increase the efficiency and reliability of industrial production systems through data aggregation and analysis technology. During 2015, CPS IIE has provided reference designs and architecture for engineering and tool chains; as well as developed business models that enable leverage of production-related data for analytics and services, bootstrapping an ecosystem along process and value chains integrating tools and service providers (SMEs, start-ups).





The CPS for Smart Factories activity contributed to enhance a number of strategy domains for the development of the “Industrie 4.0” concept, such as industrial robot arms for car manufacturing, steel industry, and assembly lines in general. The main objective was to implement solutions for the application domains and let the industry partners provide feedback about the cost reduction potential. The tight cooperation of automation and IT vendors has enabled sustainable business models supporting the European manufacturing sector to manage its increasingly complex, inter-organisational production networks and align them efficiently with global supply chains. The individual components will be ready as products or as input for product development. Innovation is supported by evaluated business models and concrete examples for customer business cases.

In 2015, the RICH (“Reliable IP for time-synchronized Channel Hopping networks”) activity, capitalized on 2014 results in the maturation and validation of a high reliability and predictable wireless networking stack for IPv6 based low-power wireless networks based on IEEE 802.15.4e TSCH. Due to the reliability and predictability and the incorporation in IPv6 (IoT), this stack is very relevant for both critical infrastructure monitoring and industrial/factory automation. However, it can also be employed for other domains like home and building automation.

In 2015, the focus of the “INDUSTRIE 4.0 powering Europe” HII was to push the rollout of successful “Industrie 4.0” (I4.0) concepts to the European space, connecting embedded system production technologies and smart production processes. Cyber-physical systems provide the basis for the creation of an Internet of Things, which in combination with the Internet of Services makes “Industrie 4.0” possible. They are “enabling technologies” which make multiple innovative applications and processes a reality as the boundaries between the real and virtual worlds disappear. Some strategic steps have been achieved: the integration of core enabling technologies for cyber physical production systems, e.g. digital product memory and building blocks for unified communication; the implementation of demonstrators showing reference processes, designs and architectures (e.g. 3D printed grippers for faster and cheaper work piece handling); the integration of the technologies, processes, designs and architectures in pilot projects within real customer environments for customers CANDY (washing machine producer) and FIAT (automotive).

These measures are steps towards improved production system efficiency and robustness through more flexible, automated production, cheaper maintenance, and more efficient logistics, bringing immediate benefit to our customers.

Cyber-Physical Systems Innovation Activity

The I3C (Intelligent Integrated Critical Infrastructures for Smarter Future Cities) activity has made a broad impact in the development of the underlying technologies required to deploy, maintain, operate and integrate heterogeneous critical infrastructures. These relate to new hardware and software for sustainable wireless monitoring, back-end infrastructure to support data from and control over embedded devices, in addition to handling network-level metadata. The work has also highlighted and quantified the limitations in the state of the art for remote, reliable and efficient actuation.

CPS IIE (CPS Integrated Information Engineering) has contributed to the long term strategic goals of EIT Digital with reference to stimulating innovation ecosystem creation (community building regarding open standardised approaches to interoperability) and with specific reference to increasing the efficiency and reliability of industrial production systems by data aggregation and analysis technology.

CSF (CPS for Smart Factories) has implemented multi-adaptive cyber-physical controllers with applications to industrial

robot arms, car manufacturing, steel industry, and assembly lines in general. The main objective is to implement such controllers for the application domains and let the industry partners provide feedback about the cost reduction potential. RICH (Reliable IP for time synchronised Channel Hopping networks) participated to the ETSI plug-test for 6TiSCH with other practitioners and the core IETF 6TiSCH work group members was a highlight where we contributed significantly. The maturity of the stack and the implementation has been proven in multiple real-life use cases and the stack is available in open source (both Contiki and TinyOS). Some results of the RICH activity are considered IETF standardization and, as such, could make the difference for the business adoption.

The "INDUSTRIE 4.0 powering Europe" high impact initiative contributed to the creation of an Industry 4.0 ground in Europe thanks to demonstrator implementations in different countries (either in lab or in production environment) and we have also created a public repository of Industry 4.0 building blocks which will contribute to the dissemination of Industry 4.0 in Europe.



Startup case study

Sentryo, an EIT Digital Idea Challenge finalist, has been coached by our business developers and access to finance managers across Europe during 2015.

Sentryo (industrial internet security), an innovative French startup in the industrial network cybersecurity space, has successfully raised €2 million to develop its international presence. The Lyon-based startup has successfully closed a €2 million funding round with ACE Management and Rhône-Alpes Création joining the investor pool.

“We wanted to be a French-German company. EIT Digital helped us since it is a European-wide organisation.” Thierry Rouquet, Sentryo CEO.

Sentryo proposes a cyber security solution for the Industrial Internet and machine-to-machine networks. Its solution, Sentryo ICS CyberVision, was launched in September 2015 and delivers an operational security capacity to prevent, detect and respond to cyber attacks. Unlike IT solutions, Sentryo ICS CyberVision is fully passive, a prerequisite condition for such critical industrial networks.

Sentryo is a nine-people startup founded in June 2014 in Lyon, France.

Future Cloud

HII European Trusted Cloud Ecosystem

We have already seen that cloud computing–based technologies have become a driver of European economy and society. Many services and applications are already cloud-based and businesses and key infrastructures are becoming increasingly dependent on it. Moreover, cloud enables high impact technologies like IoT and Big Data Analytics.

This importance is reflected in the total economic impact of Cloud technology, estimated to become \$1.7 trillion to \$6.2 trillion annually between now and 2025. Although Europe does not have a specific competitive advantage in cloud technology, due to its importance Europe's businesses and society cannot afford to rely on technology and services bought solely from elsewhere. With the increasing capabilities of leading European start-ups, innovations in existing businesses as well as cloud initiatives in the public sector, Europe has the opportunity to accelerate innovations and achieve an independent leadership position. Concerns about cloud security and privacy, however,

make consumers and businesses tread cautiously with their cloud initiatives and especially with personal, sensitive and critical data. Hence, building trust in the Cloud combined with the strong European General Data Protection Regulation (GDPR) provides great business opportunities.

2015 highlights

In the Future Cloud Business Community there were 18 deals (17 of which were international) worth €5.1 million.

British Telecom has embedded several services on their BT Cloud platform for production. F-Secure has a partnership agreement with an SME (Finbiosoft) on the way and several operator or Fortune 100 lead on their services.

Multi-cloud data management activity has developed a complete mobile edge cloud model (based on the ConPaaS stack) and the flexible migration of lightweight service containers. There is a spin-off to commercialize services in mobile digital advertising. More complex scenarios for future use of the technology could be augmented reality solutions where local data could be mapped real time on your mobile.

Accelerating the development of Apache Flink™ (flink.apache.org), a European open source distributed Big Data analytics system for expressive, declarative and efficient batch and streaming data processing and analysis. The number of Apache Flink™ contributors is close to 200, including several universities and companies, and interest is growing.

New data confidentiality and integrity protection mechanisms for IaaS clouds combined with secure storage protocols that allow user search on encrypted in clouds open up radical new telecommunication business opportunities. The Security SLA solution has been transferred from research to product development at Ericsson and is intended to reach the market in the coming year.

Innovation Activity

Future Cloud:
Solutions & Advanced
Connectivity Platform

The Future Cloud HII - European Trusted Cloud Ecosystem - has created a loosely coupled model for value adding collaboration in practice. This extendable ecosystem enables digital freedom where people do not need to worry about their whereabouts or where they store their data and which device they use. All the services created by core partners have been piloted via direct SME involvement through an open SME call, where a significant impact has been created to support the SME's in their everyday business creation in addition to the European Trust value promise. In particular, Telecom Italia has piloted the Personal Data Store concept with one retail chain in Italy and is on discussions with the Finnish retail chains on starting pilot activities on context of Finnish governmental MyData project.

F-Secure has opened its Cloud Security service for several pilot customers in the operator and health domain. Business potential seems to be bigger than expected. British Telecom has been building the service store concept and adding capabilities for privacy and trust on top of it. Commercialisation planning has started for the Service Store and respective Data Security services.

Startup case study

Severalnines software makes it easy to deploy and operate database clusters. The Swedish startup won "Best Cloud Startup Europe" at Eurocloud and is already working with prestigious customers such as British Telecom, Cisco and Technicolor. Severalnines has sustained a 50%+ growth rate for the last three years and has been supported by EIT digital along this growth path. Initially Severalnines was hosted by EIT Digital. In the product development phase Severalnines was given Access to Competence. The Business Development Accelerator has provided support and relevant business training and assistance in business modelling. Going forward, Severalnines is uniquely positioned to take advantage of the strong pan-European network and Access to Market and Access to Finance EIT Digital can offer.

"As a 3D Repo start-up, we have actively engaged with consortium partners, most notably VTT, Digital Catapult and British Telecom as well as a number of fellow startups. They all provided invaluable advice, support and technical expertise as well as business acumen. What is more, as a direct result of the project, we have now started offering secure cloud solutions using the Trusted Cloud infrastructure to our commercial clients in the construction industry." Dr Jozef Dobos, 3D Repo

Future Networking Solutions

The Future Networking Solutions Action Line is about supporting the European lead in solutions and standards based on cost-effective as well as energy-efficient networking technology which supports the increasing traffic, new traffic profiles and provides the flexibility to manage large demands for instantaneous traffic.

Networking is a core ICT element providing infrastructural support to almost all applied ICT services, and a pre-requisite for executing the applications, with an ensuing huge global market. Telecom services alone represent some € 1.280 billion per year worldwide and around € 300 billion per year for equipment alone (Gartner Group).

In volume, the major market growth area is mobile networking. From an already impressive 7 billion mobile connections and 1.6 billion mobile broadband subscriptions, the annual growth rate for mobile broadband connections is increasing by 40% worldwide and is showing an exponential growth in data traffic. This field is addressed in the priority area "Green Mobile Access Networks".

Software Defined Networking (SDN) is currently being developed to improve utilisation and flexibility of the network investments. This is achieved by decoupling network logic and policies from the hardware. SDN business is projected to grow from \$360 million in 2013 to \$ 3.7 billion in 2016. More importantly though, SDN will open up disruptive business opportunities which will attract the attention of operators, large equipment manufacturers and SMEs world-wide.

The emerging Internet of Things landscape will revolutionise the way our things and machines communicate and the services they provide. This will open up tremendous new business opportunities, but will also put a significant strain on the communications infrastructure.

2015 highlights

The action line achieved a very high number of KPIs in total 51 KPIs and one startup Klick Technologies. Klick Technologies is a spin-off from the innovation activity EXAM and 1 new product from Networks for Future Media and five Technology transfers from EXAM, Networks for future Media and Efficient IoT together. Two business models were incubated from EXAM and SDN@edge respectively. We achieved 34 Knowledge adoptions and nine innovation deltas.

We started the Business Community in 2015 and we have now 12 companies that we are coaching and more to come in 2016.

Several startups attended MWC 2015 and IoT Solutions World Congress in Barcelona and found valuable business opportunities. The Business community was also very successful in attracting large industry interest in IoT round table meetings.

The new High Impact Innovation activity ACTIVE (Advanced ConnectIvity platform for

Vertical segments) was started in September 2015 and is now in full speed with three nodes participating Stockholm, Helsinki and Milan. It focuses on providing a generic platform for Internet of Things and applications on top of the platform with the aim to disrupt the current business model of IoT from stovepipe vertical oriented to horizontal. Ericsson is the project leader.

A number of dissemination events have taken place e.g. keynote at RAN World, a commercial event, where the ALL Henrik Abramowicz presented results from the priority Green Mobile Access networks. We had presentation at the partner event in April in Trento, IoT for Real in June Sweden as well as at other events ended the year with the FNS dissemination workshop day in December 2 in conjunction with the Idea Challenge final on Internet of Things, and Stockholm Demo Day on December 3

The summer school was attended by 43 Master students and some of the business ideas generated may lead to new companies; the winning Airometer team pitched their case at the IDEA Challenge.

Future Network Solutions

Innovation Activity

The EXAM activity, Efficient Xhaul and M2M, pursued three of the FNS key technologies; energy efficiency, mixed fronthaul and backhaul solutions and machine-to-machine communications - a key aspect of Internet of Things.

In order to achieve economic and social impact, the mobile access architecture for bringing mobile coverage into homes was developed. The system uses the telephony copper infrastructure and is compatible with fixed broadband systems based on ITU-T standard G.fast. BT in UK is actually field testing this for massive deployment until 2020 (potentially 10 million lines) for ordinary broadband access to homes as well.

A free-space optical fronthaul was investigated to enable small radio cells to be quickly deployed and retrieved. It is particularly suitable for temporary installations providing mobile broadband at large events

A small-cell deployment planning and optimization tool was developed to enable operators to densify the mobile networks and by this provide higher bandwidth to its customers.

The activity has proposed solutions for quicker deployment of base stations and integration of machine type communications which will decrease cost

and expedite deployment of base-stations as well as provide support for M2M communications and applications (explained in deliverable 15501-D02 and 15501-D03). Furthermore, the activity has proposed energy-efficient solutions that will decrease the CO2 emission.

Experimental results showed good savings in terms of energy efficiency for LTE network. This would have a positive impact on the electricity bill for the network operator.

Moreover, we optimized the network also in presence of M2M services, and showed that in presence of selective ON-OFF switching of the cell, the implemented solutions are able to guarantee the M2M service continuity. Furthermore, the implemented solutions have a relevant impact on the M2M infrastructure side (in practical deployments): 50% reduction in Photovoltaic module sizes, backup batteries with 50% capacity, reduced overall weight and space occupancy, better installation characteristics.

Further impact for SME: knowledge acquisition and possibility to implement a further product line of M2M gateways, potentially fully powered by batteries and more suitable for particular installation use cases. Longer term impact on LTE devices, especially in the view of introduction of more cost effective modems.

Startup case study

Light Flex integrates safety and style by utilising a printed active light technology, to provide enhanced visibility and increased safety and enhanced with sensors to communicate e.g. at alarms. The company was started 2015 and is based both in Stockholm and Barcelona a truly European company.

Lightflex is a supplier to POC; a Swedish company with a strong mission 'to do the best we can to possibly save lives and to reduce the consequences of accidents for gravity sports athletes and cyclists'.

The approach being explored is at the forefront of research and development as it uses independent active light to support rider visibility as opposed to regular passive reflective technology used on most bike apparel.

Light Flex Technology uses its novel technology which can be incorporated into any wearable to increase visibility. The patented technology is lightweight, flexible, washable and easily integrated. Light Flex Technology offers design flexibly since it can be printed in complex shapes and does not compromise comfort or aesthetics. Through sensor provided by Neue lab, another Swedish coached startup, there is to provide additional sensors and connectivity for the sensors to increase the safety of the wearers of the Lightflex garment.

EIT digital has given Lightflex business support such as coaching access to finance, access to markets, and support at fairs like IoT solutions World Congress in Barcelona 2015.

Health and Wellbeing

The purpose of the Action Line is to reduce healthcare expenses and maintain quality of life. In Europe, an ageing population implies that people will live longer but need to work longer and people (of course) live longer.

It is the aim of the Action Line Wellbeing to slow down the growth of the health care expenses while maintaining the quality of life at higher age. This is achieved by reducing the demand for expensive healthcare through the detecting of small physical and mental health issues at a very early stage and avoiding larger health problems by suitable lifestyle interventions.

ICT enabled breakthroughs, for instance wearable internet, supercomputer power in your pocket, and smart sensors (potentially implantable ones) will be critical in meeting the EU 2020 challenge to increase labour participation and independent living by two years.





2015 highlights

The Action Line is a pan-European collaboration of 33 partners from industry, research and education which coached 18 startups during the year. It is currently running six innovation activities: Better Nights Fresh Days (Prevent sleep deprivation of young parents by monitoring baby's sleep patterns), PRAF (Disruptive solution of self-managed cardiac risks assessment), Fit to Perform (The action line High Impact Initiative, Improve the health of professional drivers, makes driving more efficient, and increases the road safety), GameBus (Platform with social health games to stimulate interaction between family members, colleagues and friends), Choose (Keep your blood pressure controlled day and night) and Generic Platform Movement Training (a generic platform for movement training to accelerate and support the rehabilitation in clinics and at home).

The High Impact Initiative Fit to Perform presented the first demonstrator at Post Expo.

Reactions were very good and valuable leads came out of the workshop of the product presentation. Fit to Perform offered internships to students from the EIT Digital Master School. The Summer School was a big success and hit the target of 50 participants. The action line welcomed 15 Master School students mixed with 35 selected external participants coming from companies and universities around Europe selected from over 100 applications.

The Business Community has as task to create or join value adding and lead generating events of the Health and Wellbeing managed to meet prospects and closed deals (232 leads and 27 deals). The community joined events and organised two startup launches for scaling up into Europe. The investment that EIT Digital did in the Health and Wellbeing Business Community was about €200k and the outcome represented by a total deal size of €9.6 million.

Health and Wellbeing

Innovation Activity

2015 saw the launch of an app and platform designed to bring family members from across the generations together, and motivate them to look after their wellbeing. GameBus allows users to play games on PC, tablet or phone and at the same time connect with their loved ones – it is part of EIT Digital's Wellbeing programme and has been developed by Eindhoven University of Technology (TU/e) together with partners Synergetics, Zuidzorg, Telecom Italia and Consiglio Nazionale delle Ricerche (CNR).

The reality is that most adults struggle with balancing a busy professional life with the care that is necessary for spouses, children, parents, and friends. Time pressure on modern families is high but making time to spend together and reconnect can be very rewarding - which is where GameBus comes in.

Coordinator of the GameBus development team, Pieter Van Gorp of TU/e says: "I was using 'Endomondo' for biking and I shared the scores with those relatives that also happen to use that app. My son was wearing an activity tracker to reward him for active days outdoors and my mother-in-law was playing Sudoku online. At TU/e, we were imagining how great it would be to connect all these games in one over-arching layer where you could motivate your loved ones."

GameBus connects family members and friends across the generations and across 'social islands'. For example, it allows users to play with family and compete against neighbours. Younger children might score points for going to visit their grandparents, teenagers for going running and taking 'social selfies' (group selfies demonstrating social behavior), or grandparents could gain points for solving Sudoku puzzles.

GameBus assigns each task with a score which is predefined by sponsors such as elderly care organisations (e.g., ZuidZorg). Synergetics, a company specialized in the privacy and security of personal data, hosts all GameBus data. Synergetics gets revenues from the sponsors, for the value they get from marketing their organisation via the app (sponsored GameBus challenges display the sponsor logo and link to the sponsor website.) The Synergetics mission is to share the value of personal data back to the data producer (read: the user) and that means that users remain the owner of their own data. GameBus sponsors are organisation who benefit from healthier behavior of patients, employees, or citizens.

The full android version of GameBus is now available free in the Google Play Stores for Belgium, The Netherlands and Italy. Next steps for the GameBus partners are to bring GameBus also to the iOS app store, to release the app in more countries and to continue improving the user experience. More external apps will be added to GameBus, for example to track diet adherence, or the quality of the air where you are running.

Startup case study

Sonormed, the scaleup behind Tinnitracks, is based in Hamburg and was founded in 2012. The relation with EIT Digital started in 2014 when Tinnitracks won the Idea Challenge in the category Health and Wellbeing. Since winning the Idea Challenge, Sonormed is coached by EIT Digital Business Accelerator and is a member of the Health and Wellbeing Business Community. Joerg Land, Adrian Noetzel and Matthias Lanz, co-founders of Sonormed, took scientific results from researchers at the University of Muenster and successfully solved the main technological issues. They built easy access to this new clinically proven therapy for chronic tinnitus and called it: Tinnitracks.

Tinnitracks is a web application which allows you to filter your music in order to use it for a new tinnitus therapy that is endorsed by the latest neuroscientific findings. Over 25 million people across Europe hear ringing tones inside their head. World-wide that number is around 400 million. Tinnitus is caused by abnormally hyperactive nerve cells in the brain's auditory center. This hyperactivity can be soothed by listening to individualised filtered music. Tinnitracks also highlights your music with a high therapeutic potential thanks to the individual analysis of every single file. The music calms the nerves and the strength of the tinnitus ringing diminishes which leads to a long-term tinnitus relief. While different types of therapy used in the past generally only treat the symptoms of tinnitus,

EIT Digital actively coached Sonormed in getting the business case clear and focused and prepared them with pitch training and access to EIT Digital's Investor's Dinners. Through the Health and Wellbeing Business Community, Sonormed was facilitated to participate at several events to increase visibility and lead generation.

In March 2015, Sonormed announced a series-A financing round that resulted in 1mio euro of funding for product development and further

corporate expansion. In parallel, Sonormed used the EIT Digital network for scaling up Tinnitracks in Europe to starting with the Netherlands; in close cooperation with the location in Eindhoven Node.

That EIT Digital was right in awarding Tinnitracks was underlined by the fact that Tinnitracks got several recognition awards such as the prestigious SXSW award 2015 in Digital Health and Life Science. A breakthrough was accomplished in September 2015, when Techniker Krankenkasse, the largest statutory health insurance company in Germany, decided to take over the costs for Tinnitracks as a digital therapy app to battle suffering from tinnitus.

In November, Sonormed announced its cooperation with EIT Digital's partner Fraunhofer Institute for Digital Media Technology, Germany. In the course of the cooperation, a software will be developed that will reinforce the patient's individual frequency within the Tinnitracks-app. This trendsetting cooperation shows that EIT Digital's work to spark the digital ecosystem across Europe together with the network, is being done in the right place.

Since its start Sonormed grew from three pioneering non-paid co-founders to six full time team members and six IT freelancers on the payroll, to date.

Joerg Land, CEO Sonormed, says: "Thanks to EIT Digital's strong support and Sonormed being a part of the EIT Digital leading European innovation network, we could make valuable contacts and advance our technology. This provided a sound basis that facilitated the Techniker Krankenkasse commitment to take over the costs for patients who use the Tinnitracks as its first reimbursed app. This is a major breakthrough as it paves the way for other German insurances to follow suit. I hope also that it will have an impact in other European countries. For instance, the cross border health directive."

Privacy Security and Trust

Lack of appropriate and timely technical solutions ensuring data security and privacy of new products and services facilitated by digital technologies may threaten their wide adoption, endanger the growth of data-driven economy, and put privacy and liberty of citizens at risk.

Cyberattacks multiply rapidly and evolve dramatically and, typically, exploit vulnerabilities in software or hardware platforms used in ICT networks. Traditional cyber security approach based on cyber monitoring and surveillance is insufficient, not privacy friendly, and may open new risks. Data privacy in cyberspace is threatened by uncontrolled mass user profiling by online service providers and abuses in surveillance and lawful interception practices by government agencies.

The strategy for Privacy, Security and Trust is to address cyber security and privacy proactively, by deploying trustworthy and transparent

innovative technologies bridging the gaps between available techniques and practice, including advanced cryptographic techniques, and to raise social awareness about threats and solutions in this area. The focus is on three priority areas: privacy-aware federated ID management & strong authentication, data privacy in online/mobile applications, services and communications, and protection of endpoint (mobile) computing devices against malicious software and intrusions. Work on secure software and hardware platforms is also supported.

2015 highlights

In 2015, the Action Line addressed the growing challenges of data security and privacy in cyberspace by five innovation activities, by the summer school "Security & Privacy in Digital Life," by the Idea Challenge contest in "Cyber security and privacy," by launching a very active Business Community with a significant number of successful coached startups, and by versatile and creative outreach and dissemination activities and events. More than 40 leads were generated, nine proof-of-concept collaborations initiated and five deals closed.

Three services have been launched: Cadence for Advanced Persistent Threats (APT) malware detection in network traffic (Reply, TNO, IMDEA), Freedom for mobile antimalware as well as privacy & security protection (F-Secure), and Mobile Application Hunter of Mobile Shield for detection and monitoring of rogue and malicious Apps in mobile markets (Reply). Such innovative services render the mobile devices used both for business and personal purposes more secure against malicious software and intrusions.

To foster enterprise and SME-based crowdsourcing jobs in EU, two new pilot services for privacy-enhanced crowdsourcing on mobile and web platforms along with a new startup Crowdee have been established. For federated ID management supporting digital single market in EU, a new e-health pilot service based on the developed FIDES platform has been launched. The services will be commercialized in 2016.

A highly innovative and disruptive new technology for privacy-preserving computation based on homomorphic encryption (e.g., to be used in the cloud or other untrusted environments) has been matured into a working prototype platform and shown practical in a number of use cases, including e-health and wellbeing, intrusion detection in network traffic, and security social intelligence (CEA, CNR, ATOS, Thales, Engineering). This contributes to creating the market for new privacy-preserving services or allowing existing privacy-intrusive services to "go private." Going to market via a spin-off of CEA is planned in 2016-2017.



Privacy Security and Trust

Innovation Activity

The crowdsourcing innovation activity addresses the resistance of entrepreneurs in EU against outsourcing company data by distributing it to a large group of workers as paid micro-tasks, by focusing on data privacy and security. For example, the tasks can relate to language translation of text files, tagging of multimedia files, and any sort of data labelling, tagging or processing. Crowdsourcing is a powerful technique for elaborating large quantities of data in a way that also create jobs. Enhanced privacy is achieved by data pseudonymisation, anonymisation, and obfuscation as well as by privacy-aware data chunking and micro-task assignment.

The activity leveraged the existing crowdsourcing platforms of EIT Digital partners, namely, the mobile-based one of TU Berlin and the

web-based one, Starbytes, of Reply. During the activity, there was a knowledge transfer of privacy techniques from Deutsche Telekom to Reply and privacy-aware task assignment techniques from TU Berlin to Reply. ELTE conducted security and threat analysis of both the platforms. TU Berlin established a startup Crowdee for commercialization of the mobile-based crowdsourcing service, whereas the privacy-enhanced Starbytes service will be exploited by Reply. The activity continues in 2016 with accent on refinement and commercialization of the two services and by extension to new use cases.

Startup case study

CHINO (www.chino.io) offers services to digital health app developers for backend data management. The services support secure creation, storage and access to health data in compliance with the EU regulations for data protection and privacy. Chino won the EIT Digital 2014 Idea Challenge on Cyber security & privacy, has been selected as one of 8 best eHealth startups at the eHealth Week 2015 and won the UNCAP 2015 Innovation Award. UNCAP ("Ubiquitous Interoperable Care for Ageing People") is an EU funded initiative aiming at delivering a suite of products and services, specifically designed to help elderly people live a more independent life. Chino is financially supported by the UNCAP consortium and is contracted to support compliance with laws and regulations governing the European eHealth markets. At SLUSH 2015, Chino participated with the support of the EIT Digital PST Business

Community in pitch competition and succeeded in being 1 of 4 winners of a total of 400 participating startups. Within the EIT Digital Future Cloud High Impact Initiative, Chino is offering its services to SMEs & large companies in building a Personal Data Store for personal and any other sensitive data. Currently, Chino is delivering its services to 10+ customers and is looking for access to finance to scale up and become the reference service for digital health in EU.

Smart Energy Systems

2015 has seen smart energy innovation topics mature further all over Europe. At the same time, the paradigm shift in energy economics has accelerated – large incumbents report record losses whereas, at the same time, start-ups display impressive success stories. The energy system is less and less fuelled by the price of a kilowatt-hour while a new core competency emerges: the smooth, swift, secure and stable organization of decentralized generation and demand by means of information and communication technology. With the landmark success of the Paris Climate Summit late in the year, new boost is given to renewable energies and energy-efficient technologies. For a European innovation platform such as the EIT, it is mandatory to translate these general trends into transient pan-European innovation topics. These must not depend on member states' market specifics, regulation or geography.

The Action Line has taken the cue and developed topical priority areas on which to focus. The first to be mentioned deals with ICT support for decentralization solutions of the energy provisioning system including hybrid energy management approaches. The second emphasizes the massive need for security management solutions, especially in the low-voltage domain of the Distribution System Operators. Naturally, as innovation management must leave room for the unexpected and the original, the Action Line's innovation project portfolio of six projects did not completely map onto these priority areas, but they were prominently represented. During the project year 2015, a particular focus in

the Action Line's management was put on the convergence of business development and innovation work.

In a series of events over the year, the Action Line's own dedicated business community was brought together with prominently staffed Round Table Discussions and the innovation project consortia. Thus, a fruitful interaction between the entrepreneurial thrust of the start-ups in the Action Line's biotope, the academia and corporate members of the project consortia, and acknowledged topical European experts was leveraged. In the following, highlights of the Action Line's project year are summarily sketched.

Decentralised management solutions

In three of the Action Line's projects, crucial aspects of the general decentralization trend in the energy system's revamp were answered. First, an easily configurable controller solution for exemplary decentralized use cases was developed. In truly textbook EIT catalyst fashion, an earlier result from funded projects was built upon to generate a marketable offer.

Also, this project displayed exemplary European collaboration between a large corporate partner (Siemens, who have since sadly left the EIT), and excellent academia. In a further project, the joint management of heat and power in a unified platform approach was tackled. Also a multi-year project, this effort culminated in its final year in a market entry. Adopted by two industrial players, the developed solution with its focus on the management of renewable energies in a distributed system excellently meets the current needs of the European energy system.

In a third activity, particular emphasis was given to lowering the threshold for microgrid implementation. A web-based consultancy framework gives, based on basic input data, first estimates for dimensioning and return-on-invest times for particular microgrid constellations in different European countries. Starting from this feedback, further services are derived. From an outreach point of view, this approach has to be judged particularly valuable.



Industrial energy efficiency

In a nice cross-domain approach, one of the Action Line's activities was concerned with the optimization of the energy up-take of large ICT networks themselves. Whereas ICT services as such turn into ever more powerful levers in the energy system's management, the underlying ICT infrastructure is under strain to consume more energy as computing power and bandwidth demand grow continuously. At the same time, novel network virtualization strategies such as Software-Defined Networks change the ICT system qualitatively. In a cutting-edge innovation effort, it could be shown that virtualization of ICT functions in the networks increases flexibility and efficiency of the delivery chain of ICT services. Taking into account further synergy effects, overall reduction of energy expenditures of 10% and more can be envisaged.

Security monitoring for critical infrastructures

In this area which is regarded as a priority field of the Action Line, a prominent activity developed monitoring systems which are designed to identify and divert non-conforming protocol traffic in the ICT control structures of the energy system. Here, the "honeypot" approach is used which attracts potential attackers by displaying virtual vulnerabilities. The observed data are made accessible among infrastructure operators. Furthermore, hypervisor technology is used to a posteriori harden legacy field devices, thus improving their security profile. Extensive tests have been carried. This activity is envisaged to be continued in 2016, eventually turning the valuable analysis results into an active management tool.

Smart Energy Systems

Innovation Activity

Developing scalable micro grid solutions for the mass market

Working with partners including CWI, Deutsche Telecom, DFKI, Fraunhofer IOSB-AST, Siemens, TNO and TU Berlin the Decentralised Micro Grid Innovation Centre innovation activity is developing scalable micro grid solutions for the mass market. This responds to the growth in energy microgeneration across Europe as renewable energy production increases its overall contribution to meeting energy demand. This increase in decentralised energy production requires far more flexible and dynamic ways to manage often intermittent sources of energy generation while balancing the grid and providing continuous service to citizens.

Partners are working on technology that can be integrated with the grid and which will provide a range of tools from multi-device top level controllers to a web-based customer engagement tool as well as detailed techno-economic simulations to aid planning and investment decision-making.

Software to help manage and optimise microgeneration is being tested based on three scenarios; 70kW – apartment building, 300 kW – small office block and 1MW – small industrial facility, and also tested against

different geographical context including national incentives, regulation and legislation in different European countries.

The platform will be made available on a plug-and-play basis allowing third parties to develop complementary apps to provide a range of services to building and microgeneration plant operators or tools for energy consultants.

The activity is also investigating the business case for developing micro generation consulting services.

Startup case study

SecurityMatters: Securing critical infrastructure networks

SecurityMatters is an EIT Digital supported startup and international Cyber Resilience company focused on network resilience for platforms supporting critical infrastructure. Based on its innovative new game-changing network monitoring, intelligence and protection technology SecurityMatters developed SilentDefense. This product supports customers to protect their mission critical ICS/SCADA networks against malicious attacks, misuses or misconfigurations.

With numerous installations spread around the globe, SilentDefense is currently protecting critical infrastructure for over more than 100 million people all over the world. With its ongoing research and development SecurityMatters positions itself at the top of Cyber Resilience companies. Typical application areas are critical infrastructures like oil, gas, power generation, power transmission and distribution, water, refineries and manufacturing.

SilentDefense exploits innovative cutting-edge technology to detect every deviation from normal process operations and flows enabling operators to react promptly and initiate immediate corrections, preventing disruptions. SecurityMatters, founded in 2009, is a privately owned Dutch company, headquartered in Eindhoven, the Netherlands. SecurityMatters partners are a.o. Finmeccanica, Ezenta, A/S Sinergy, Hudson Cybertec and EIT Digital. SecurityMatters delivers cutting-edge industrial network monitoring, intelligence and protection technology that gives insights into the customer's ICS/SCADA and process control network, operations and cybersecurity. SecurityMatters has installations in all major critical infrastructure and smart grid sectors, e.g. energy distribution and transmission system operators. Its flagship product – SilentDefense – has been used in production since 2011.

Smart Spaces

Smart Spaces create comfortable experiences for users and efficient resource optimization solutions for businesses by applying advanced digital solutions to everyday working and living environments. The big opportunity of using the data collected from the physical environments is still largely untapped. There are numerous opportunities in various operations to better understand and serve users, customers or workers.

Smart Spaces solutions help industries like retail and mobile operators or internet service providers better serve their customers. Other businesses benefitting from smart space solutions include e.g. mobile and out-of-home advertising and info services, lighting, digital signage, and building and office automation. The added intelligence and enabled new services increase competitiveness of several European industries.

The focal areas Action Line are smart retail, smart buildings and smart urban experiences.

In smart retail, this is specially about creating blended in-store and online solutions and experience to consumers in an omnichannel environment. For smart buildings, the needs relate to supporting productive working, learning and collaboration environment, and the use of office space and optimization of resources and facilities. Smart Urban Experiences include information delivery solutions for citizens, event participants and local businesses with users' own devices or public interactive screens.



2015 highlights

The action line achieved 64 KPIs in total, with three new startups as a highlight. ThinkInside is a spin-off from an earlier startup (U-Hopper) and it offers in-store analytics service for retailers. Neosensys was established in the Brick and Mortar Cookies activity and it has created combined video surveillance and business analytics for retailers. Spaceify is an outcome from the High Impact Initiative Street Smart Retail and it is providing an edge computing application platform for interactive digital signage to be used in retail spaces, and also other kinds of public environments-typically by digital signage companies.

In addition to these, we achieved nine new or improved products, 16 knowledge transfers and 21 knowledge adoptions.

Digital solutions enabling blended physical and electronic commerce were brought to the market by startups and EIT Digital partners. Companies and subgranted startups working in the activity Brick and Mortar Cookies and in the High Impact Initiative called Street Smart Retail, introduced solutions for in-store analytics, intelligent lighting and in-store digital marketing.

Smart Spaces business community was started and for 2015 it focused on smart retail companies providing shopping experience solutions, customer engagement solutions, retail analytics and payment solutions. The community helped the companies to reach out to system integrators and solution providers of retail sectors e.g. at selected events, which resulted in new prospects (159 leads) and actual sales (14 deals). Three of the companies also contributed to Smart Spaces summer school with case examples and entrepreneur lectures.

Innovations to make buildings smarter were started by using real-time elevator data. In the People Flow API activity, an open challenge was organized, which attracted a big interest from startups with 45 applications from all over Europe. At SLUSH 2015 KONE brought three of them to showcase their products and services; two from Finland – iBeaconFI and Bt.tn and one from Estonia, In Door Ninja. The open challenge was just the beginning of a larger initiative to bring together innovative startups and key system providers in building technologies.

Smart Spaces

Innovation Activity

Playful Supervised Smart Spaces (P3S) activity targeted to provide an affordable solution of a smart interactive room for therapies of children with intellectual disabilities. It transforms any physical room (min size: 4 m²) into a multisensory interactive environment that incorporates virtual worlds, displayed in the ambient, and everyday objects, such as toys, lights, displays and carpets, which become smart and interactive by effect of technology.

Children's activities consists of simple games that involve interactive smart objects and virtual worlds, and enable kids to experience different ambient stimuli and be engaged in different activities: to relax, to play, and to exercise specific cognitive, emotional, motor, and social skills. Children's activities are monitored and analysed via cloud for therapists and for network of experts.

IBT Solutions integrated this to a product called Magic K-Room. First installation was done at the pediatric division of Fatebenefratelli Hospital (Milan). The product responds to the increasing demand, by therapists, scientists, and families, of treatments that are alternative or complementary to the current practice. The cost is affordable to an average institution and is scalable to its spending power. In the EU28 zone there are approximately 3400 assistance centres + 270 therapy centres; as each centre has in average 25 therapists or special educators, the innovation can have a potential impact on 40000 - 100000 specialists.

Partners were Politecnico di Milano (smart objects fabrication), IBT Solutions (integrator and marketing), Telecom Italia (cloud based services), IMEC (headsets, data analysis algorithms & techniques), Philips (smart lighting) and ST Microelectronics (sensors&actuators). Three therapeutic centres (Abilita, Sacra Famiglia, IT, and SAM Found, NL) were subgranted to support on-the-field evaluation.

Startup case study

Zoined offers Retail and Hospitality Analytics as a cloud based service. It helps helps retail companies increase and optimize their sales through point of sales data. Zoined is an off-the-shelf solution with ready-made dashboards and analytics for retail and wholesale, especially for specialty retail, fashion, food retail, coffee shops and restaurants' needs.

With automatic email reports and browser based portal retail chains can track their business anytime and anywhere, also on mobile devices. By using the Zoined's Business Intelligence solution retail chains can reduce the time spent on creating and interpreting their reports. More than 500 stores in seven countries are using Zoined's service already.

The Accelerator has provided Zoined support for market expansion in several countries, French, Dutch and UK business developers have helped Zoined to explore markets and to

find international customers. The collaboration has given Zoined the access to investors and business contacts through several international exhibitions and one-to-one negotiations, which have led to numerous leads and later in 2015 to commercial deals.

During 2015 Zoined launched operations in two new countries; Sweden and UK. Zoined is an active member of Smart Spaces Business Community which was started in early 2015, has attended various training sessions organized by EIT Digital and thus has fully explored EIT Digital network and ecosystem. Through market expansion and international presence Zoined has been able to add visibility and attract also more funding to the company. EIT Digital Accelerator has contributed to Zoined's ability to hire new people, to expand to new markets, to grow revenues and increase value of the company.

Urban Life and Mobility

Urban Life and Mobility deals with Smart Cities ...but there will be no Smart Cities if there are no Smart Citizens. Emergence of new behaviours - the way people move, work, entertain, socialize - will be at the origin of new upcoming business models.

More and more, we become both services consumers and services producers. With social networking, crowdsourcing, live information, we have the chance to turn from passive and consumer-minded individuals to active, collaborative and sharing-oriented citizens.

Enabling a sustainable mobility, improving urban information management, preserving privacy and addressing trust issues, these are the main Urban Life and Mobility Action Line challenges. In this context, ICT technologies will create opportunities for innovative businesses and will leverage mass deployment of societal innovations, resulting in value creation and renewed city governance.

In 2015 Urban Life and Mobility focused firstly on integrated mobility services, deploying mobility market place concept, alternative solutions in Europe, secondly on urban data economy, from silo oriented organisation to transversal data and information exchange, allowing emergence of new business actors, thirdly on citizen engagement and empowerment, renewing the democratic dialog with governance bodies, and fourthly on city planning and gaming, to design and validate in a collaborative way the future urban environment.





Four innovation activities innovative products and solutions brought to the market:

- 3cixty is a platform for building applications that help visitors to compare and combine information about events, places and transport in a city. First deployed in Milan for Expo2015, it will be now deployed in London and in a French city.
- Connecting Digital Cities solution is an application to provide vehicle drivers and travellers with smart and real-time adjusted inter-modal itineraries, based on crowd sourcing and mobility analytics services. Deployments in Helsinki and Lisbon proved the interest to integrate public and private transport in a seamless Mobility as a Service approach.
- FlashPoll is a mobile application for public institutions, administrations and government to interact with their citizens through short geo-localized and contextualized polls, and was used during COP21 in Paris.

- Beta-tested in three European cities, ProtoWorld is an interactive simulation tool that allows mobility stakeholders to collaborate in envisioning new mobility strategies and experimenting with different scenarios in a realistic 3D-simulation environment.

Early July, the Urban Life and Mobility Summer School assembled 44 master students in London. Beside inspirational and entrepreneurial lectures, they worked on use cases proposed by UK municipalities and provided by industrial and startup partners.

EIT Digital and the Mayor of London's Office presented a full afternoon dedicated to Smart Cities innovations on November 23rd, and ran the 'Urban Life and Mobility' Idea Challenge final. Karos, a ground-breaking carpooling app won the first prize, while second and third prize were awarded to Addact, a website for collaborative concerts organisation and Zonzofox, a travel guide that uses augmented reality.

Urban Life and Mobility

Innovation Activity

Many people travel to other cities for business or pleasure and would like to plan their visit so they can find the things most interesting to them. Often this is hard as information is spread over so many websites, apps and sources. Visitors miss out on potential highlights, potential customers does not find city stakeholders and app developers have a hard time building applications that go beyond the usual single search options.

3cixty provides the technology to create a comprehensive city knowledge base with all relevant data in one place. 3cixty provides powerful tools to make use of the knowledge base and build a broad range of applications for city visitors, residents or in fact any city stakeholder. 3cixty also provides capabilities to users to personalize these applications to their preferences.

ExplorMI 360, the first major 3cixty application, was developed to get the most out of the city of Milan and Expo2015. The application is available on the Web, which includes links to mobile apps on Google Play Store and App Store. It was also deployed on the tablets available inside the Expo. If you are an application developer, using a model-driven development environment, you can develop such applications, which make use of the comprehensive 3cixty knowledge base concerning places and events in Milan, including Expo 2015., to create cross-platform mobile applications. 3cixty structured partnership is a mix between industries (Telecom Italia), academia (Cefriel, Eurecom, Politecnica Madrid, Politecnico Milano, TuDelft, University College of London), research centres (DFKI, INRIA), SMEs and startups (InnoValor, Localidata, Ambientic, Evensi, Mobidot).

Collaborations with European programmes and initiatives

Future Internet Research and Experimentation+ (FIRE+)

The availability of testbeds for experiments and validation purposes is a crucial enabling factor for the deployment of product, services and applications on the Future Internet. Within our collaboration with the FIRE+ program, EIT Digital submitted a project proposal aiming at federating SDN testbeds available at some of its partners' side, making them available to the larger community of developers and innovators. Coordinated by EIT Digital, the project, called SoftFire+, will start on February 1st, offering plenty of opportunities to third parties to exploit the SDN federated testbeds to develop new services and applications.

SoftFire+ is a pivotal element of a wider strategy of EIT Digital that aims at paving the way towards innovative businesses around SDN and NFV on a global scale. Indeed, SoftFire+'s federated testbed:

- will be a major asset of the "Certification Centre for SDN and NFV", a new initiative of EIT Digital aiming to incubate a test and certification centre for the business acceleration of Software Defined Networks (SDN) and Network Function Virtualization (NFV) components under the vendor neutral EIT Digital label.
- will be a major asset of the "Cross-Atlantic technology testbed for SDN" a flagship activity currently being deployed through our Silicon Valley hotspot, with three cases of evaluated business models across USA and Europe.

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 for smart infrastructures, and increasing the effectiveness of business processes through the Internet. Formally signed during 2013, our collaboration in 2015 unfolded through:

- an EIT Digital activity (FI-PPP Liaison) focusing on small and medium size enterprises (SMEs);
- the "Incubating Internet Innovation Hubs (I3H - <http://www.fi-ppp.eu/i3h/>)" project that, coordinated by EIT Digital, is supporting the penetration of the FIWARE platform in the European innovation ecosystems through the establishment of a network of European Innovation Hubs committed to disseminate and support FIWARE adoption in their ecosystems. After two selection rounds, in 2015 the number of accelerators, incubators and innovation clusters selected grew to 17. During 2015, the network took on a formal nature by the establishment of the iHUB.eu legal entity which is by now a fully integrated organization in the FIWARE larger community.

The Big Data Value Association

The Big Data Value Association (BDVA) is the private counterpart to the European Commission in the Big Data Value Public Private Partnership (BDV-PPP). The latter is an European programme aiming at strengthening the data value chain, in order to allow Europe to play a relevant role in Big Data in the global market. Through the BDVA, the European Commission has teamed up with industries, research centres and academia in order to cooperate in data-related research and innovation, enhance community building around data and to set the grounds for a thriving data-driven economy in Europe.

In June 2015, during the Big Data Summit in Madrid, EIT Digital and the BDVA signed a Memorandum of Understanding paving the way towards collaborations in the area of Entrepreneurial Education and Innovation driven by Big Data technologies and applications, and towards the creation of an innovation ecosystem for the European Big Data economy.

ETSI

ETSI is a European Standardisation Organisation that attract a worldwide constituency. In 2014 EIT Digital and ETSI signed an agreement to share information and align part of their activities. The agreement builds on the major role played by ETSI in setting up operational standards and on the role played by EIT Digital in deploying technologies and products that have to live up to those standards and/or are pressing for standard evolution. ETSI will support SoftFire+'s standardization activities in the SDN field.



Communications

Our strategic communication goal is to establish EIT Digital as a leading innovation and entrepreneurial education brand across Europe.

2015 has been a busy year as activity increases across the organisation requiring a growing communications effort to ensure that the positive work EIT Digital is doing is shared externally.

A key development of the year for communications was the rebrand in June. Changing the name from EIT ICT Labs to EIT Digital was accompanied by a change of logo and look and feel which aligns us with the updated EIT brand. This provides EIT Digital with the ability to build on and significantly contribute to the EIT brand and its recognition across Europe. This has also presented the opportunity to revisit our marketing and communications channels and assets to ensure consistency and clarity of design and messaging. Work has included revising our corporate website and building our profile on social media.

Other highlights from across the year include the Partner Event held in Trento in Italy in April for more than 400 of our key stakeholders, the 4th Master School kick off in October and the first of our Doctoral students who graduated in December. We also ran the second Idea Challenge, attracting record entries and hosting final pitch events across Europe.

Throughout the year we have continued to build our audience through a number of key channels, including attracting almost 700,000 page views to our web site and increasing Twitter followers by 130%. We have also leveraged European-wide and international events such as the IAA International Motor Show, Slush,

Smart City Expo, Milan Expo and IoT Solutions World Congress raising the profile of our organisation and our work with global audiences in industry. These events have also been a superb opportunity for our Innovation Activities and coached startups to raise the profile of their products, generate leads and secure deals.

Looking forward, 2016 will be an important year in terms of further honing and targeting our message in line with our Strategic Innovation Agenda (SIA) for 2017 – 2020. The strategy will be launched at our Driving Europe's Digital Transformation Conference and Partner Event in April 2016 in Brussels where we expect to have over 900 attendees from a wide range of stakeholders during the three-day event. We will also be working to support the organisation as we begin to diversify our income streams and move towards a self-sustaining model.



Financial Review

The Grant Agreement 2015 and associated Business Plan were signed by EIT on May 28 2015 for the total budget (catalyst and carrier) of €333,380,071. The catalyst budget was estimated at €95,838,399 with a maximum EIT contribution of €83,824,033.

Stan Smits
EIT Digital



This budget was the basis for the Partner Grant Agreements 2015.

In September 2015 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 2015 signed on December 21 2015. The budgets against which the reporting has taken place were €285,714,091 for the total budget, €87,125,546 for the catalysts with a maximum EIT contribution of €75,806,821.

During 2015 one amendment to the PGA was approved in October. The October amendment solely contained activity change requests to reflect the reduced budgets from the Business Plan Addendum.

The actuals reported by the partners are €270,512,399 or 95 percent of the overall budget, €78,980,669 or 91 percent of the catalyst budget and an EIT Request of €66,787,790 or 88 percent of the EIT budget.

In general, the EIT actuals in the Action Lines are about 12 percent below the EIT budgets. The exceptions are the Doctoral School being 27 percent and the Master School being 14 percent below budget. The Cross Europe Activity was 50 percent below budget.

Action Lines	EIT Actual	Co-funding Actual	KAVA Actual	EIT Budget	KAVA Budget	KCA Actual	KCA Budget
1. Strategy and ERB Dev	€7,590,014	€538,079	€8,128,093	€8,359,447	€8,359,447	€10,904,176	€10,588,870
Business Catalyst Dev	€4,376,786	€414,159	€4,790,945	€4,790,847	€4,790,847	€9,131,147	€8,849,000
Business Prizes and Support	€870,700	€9,055	€879,755	€1,087,600	€1,087,600	-	-
Education Catalyst Dev	€1,385,636	€101,736	€1,487,372	€1,475,000	€1,475,000	€198,126	€420,000
Research Catalyst Dev	€254,472	-	€254,472	€285,000	€285,000	-	-
Strategy Support	€702,421	€13,128	€715,549	€721,000	€721,000	€1,574,903	1,319,870
2. Action Lines	€48,843,081	€10,162,401	€59,005,482	€55,200,374	€65,468,099	€179,721,136	€187,099,675
Cyber-Physical Systems	€5,143,268	€1,118,098	€6,261,365	€5,670,455	€6,908,482	€27,226,618	€26,929,336
Doctoral School	€1,807,460	€34,022	€1,841,482	€2,474,340	€2,478,000	€4,210,284	€5,494,920
Future Cloud	€4,890,599	€1,246,639	€6,137,238	€5,500,500	€7,330,323	€18,701,091	€22,371,492
Future Networking Solutions	€5,500,172	€957,235	€6,457,406	€6,108,511	€7,175,701	€21,722,136	€20,726,201
Future Urban Life and Mobility	€4,280,700	€427,317	€4,708,018	€4,500,946	€4,678,045	€11,804,606	€11,499,394
Health and Wellbeing	€5,674,460	€1,477,449	€7,161,910	€6,425,186	€7,786,683	€25,687,559	€28,176,263
Master School	€7,498,926	€1,498,645	€8,997,571	€8,739,799	€10,112,299	€5,836,221	€6,073,400
Privacy, Trust and Security	€3,826,118	€1,338,571	€5,164,689	€4,040,172	€5,055,051	€19,449,593	€19,396,905
Professional School	€1,213,737	€201,341	€1,415,078	€1,316,119	€1,316,119	€4,268,687	€4,492,640
Smart Energy Systems	€3,840,029	€165,911	€4,005,940	€4,371,532	€4,421,532	€16,010,665	€16,290,714
Smart Spaces	€5,157,612	€1,697,173	€6,854,786	€6,052,814	€8,205,864	€24,803,676	€25,648,410
3. CLC and Ecosystems	€6,466,720	€1,321,473	€7,788,175	€7,654,500	€8,650,500	€450,000	€450,000
Co-location Centres	€5,365,886	€1,115,760	€6,481,645	€5,750,000	€6,474,000	€450,000	€450,000
Cross Europe	€695,170	€1,441	€696,610	€1,401,500	€1,401,500	-	-
Silicon Valley Outpost	€405,647	€204,273	€609,920	€503,000	€775,000	-	-
4. Management	€3,887,993	€170,926	€4,058,919	€4,592,500	€4,647,500	€456,419	€450,000
Certificate Financial Statements	€233,795	€27,377	€261,172	€322,500	€322,500	-	-
Management	€2,743,038	€92,355	€2,835,393	€3,025,000	€3,025,000	-	-
Marketing	€911,159	€51,195	€926,354	€1,245,000	€1,300,000	€2,123,456	€2,123,456
Grand Total	€66,787,790	€12,192,879	€78,980,669	€75,806,821	€87,125,546	€191,531,730	€198,588,545



CEO Statement

Outlook

Willem Jonker
CEO, EIT Digital

The new Framework Partnership Agreement and our updated Strategic Innovation Agenda will make 2016 a transitional year as we deploy them in our organisation and operations. With the release of our updated Strategic Innovation Agenda at our Partner Event in April we define the strategic direction for EIT Digital for the coming years. The Strategic Innovation Agenda, which covers 2017-2019, is characterised by a sharpened mission around the digital transformation of Europe, a stronger focus and coupling with societal challenges via a reduced set of Action Lines (Digital Cities, Digital Industries, Digital Wellbeing, Digital Infrastructure) and an even stronger focus on growth, scaleups and acceleration towards the market.

Regarding our ecosystem, in 2016 we will consolidate our geographic footprint and intend to significantly further grow our number of industry partners with a special focus on SMEs. In our Nodes we will strengthen the relationships with national instruments also in the light of our sustainability objectives. Our efforts in Europe outside our Nodes as part of the EIT Regional Innovation Scheme will be concentrated on the Digital Innovation Centres selected in 2015 and the establishment of four more in 2016. Our Silicon Valley Hub will go into its second year of operation and the focus will be on higher EIT Digital visibility in Silicon Valley, selected entrepreneurial education and innovation activities and the establishment of an industry liaison programme.

Our entrepreneurial education activities, will include another increase in the intake of the Master School from 300 in 2015 to 400 in 2016. The Doctoral School will fully deploy the new programme and Doctoral Training Centre set-up thereby significantly increasing the daily presence of PhD students, and thus disruptive research, in our Co-Location Centres to feed into the innovation activities. The Professional School targets minimally 500 paying participants to the 25 blended courses that will be offered in 2016.

Before the summer of 2016 we will have completed the transition of our Action Line set-up from the current eight innovation action lines to four new Action Lines thus creating more focus and less overhead. 2016 will be a year of sustained impact via delivery of high value results when it comes to creation of new products and services, thus further strengthening the economic impact of EIT Digital. Our accelerator will further drive integrated support for the action line activities and scaleups and the intention is to move the average investment further up toward €4 million.

Integration of Education, Research, and Business remains one of the unique aspects of EIT Digital. In 2016 we will further drive the involvement of our Master and Doctoral students in the innovation activities of our Action Lines, especially with the growing

number of master and doctoral students participating in our schools. Also in 2016 we will further develop our summer schools with strong industry involvement, and we will intensify our business communities where researchers, entrepreneurs and buyers of digital innovations meet.

Finally, EIT Digital has the mission and ambition to become a sustainable organisation driving digital innovation and entrepreneurship. We are deploying a number of initiatives in 2016 aiming at revenue generation especially around our EIT Digital Accelerator and around our Professional School. In addition, we deploy initiatives to diversify our sources of income, amongst others via European, National, and Regional programmes.

2016 will be a year of sustained impact via delivery of high value results through which we will take the next step on our journey towards a sustainable and impactful European digital innovation and entrepreneurial education organisation. I look forward to meet many of you during my various visits to our Co-Location Centres and events. Thanks in advance for your commitment and drive in contributing to realise the mission of EIT Digital.

2016 will be a year
of sustained impact
via delivery of high
value results

Willem Jonker
CEO, EIT Digital



Management Committee

The Management Committee comprises the Chief Executive Officer (CEO), Chief Strategy Officer (CSO), Chief Operations Officer (COO), Director of Communications, Research Director, the Business Director (post vacant as at 31 December), the Education Director and seven Node Directors responsible for CLCs in Berlin, Eindhoven, Helsinki, London, Paris, Stockholm and Trento.

Each Node is governed by a Node Executive Committee (NEC) elected by the Core Partners associated of 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, Research and Business Directors are each responsible for developing and delivering activities in their respective areas. The Communications Director 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

(as of December 2015)

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
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Paris
Jean-Luc Beylat
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Engineering
Oliviero Stock
Trento Rise

Helsinki
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Aalto University
Jukka Rantala
Nokia



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- Acreo Swedish ICT 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
- Amadeus
- ATOS Spain S.A.
- Bittium Safemove
- Bittium Wireless Ltd.
- Bosch Security Systems B.V.
- British Telecommunications public limited company
- Budapest University of Technology and Economics
- C.R.F. Società Consortile per Azioni
- Cap Digital
- CEFRIEL S.CONS.R.L.
- Commissariat à l'Énergie Atomique et aux Énergies Alternatives
- Consiglio Nazionale delle Ricerche
- CREATE-NET
- CSC - IT Center for Science Ltd.
- CWI
- DATA PUBLICA
- Deutsche Telekom AG
- Deutsches Forschungszentrum für Künstliche Intelligenz GmbH
- Digital Catapult
- EIT Digital Alumni Foundation
- EIT Digital IVZW
- EIT Digital Silicon Valley
- EIT ICT Labs Germany GmbH
- EIT ICT Labs Italy
- EIT ICT Labs Stockholm
- Engineering Ingegneria Informatica S.p.A.
- Eötvös Loránd University
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- Ericsson GmbH
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- Fundación IMDEA Software
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- Lund University
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- SAP SE
- Security Reply srl con Socio Unico
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- SICS, Swedish ICT AB
- Siemens AG
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- Stichting imec Nederland
- STMicroelectronics Srl (Italy)
- Stockholm Innovation & Growth AB
- Stockholms universitet
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- Tampereen yliopisto
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