



EIT Innovation Forum

Highlights | #InnovEIT

05-07 May 2015 | Budapest, Hungary

EIT Innovation Forum Highlights

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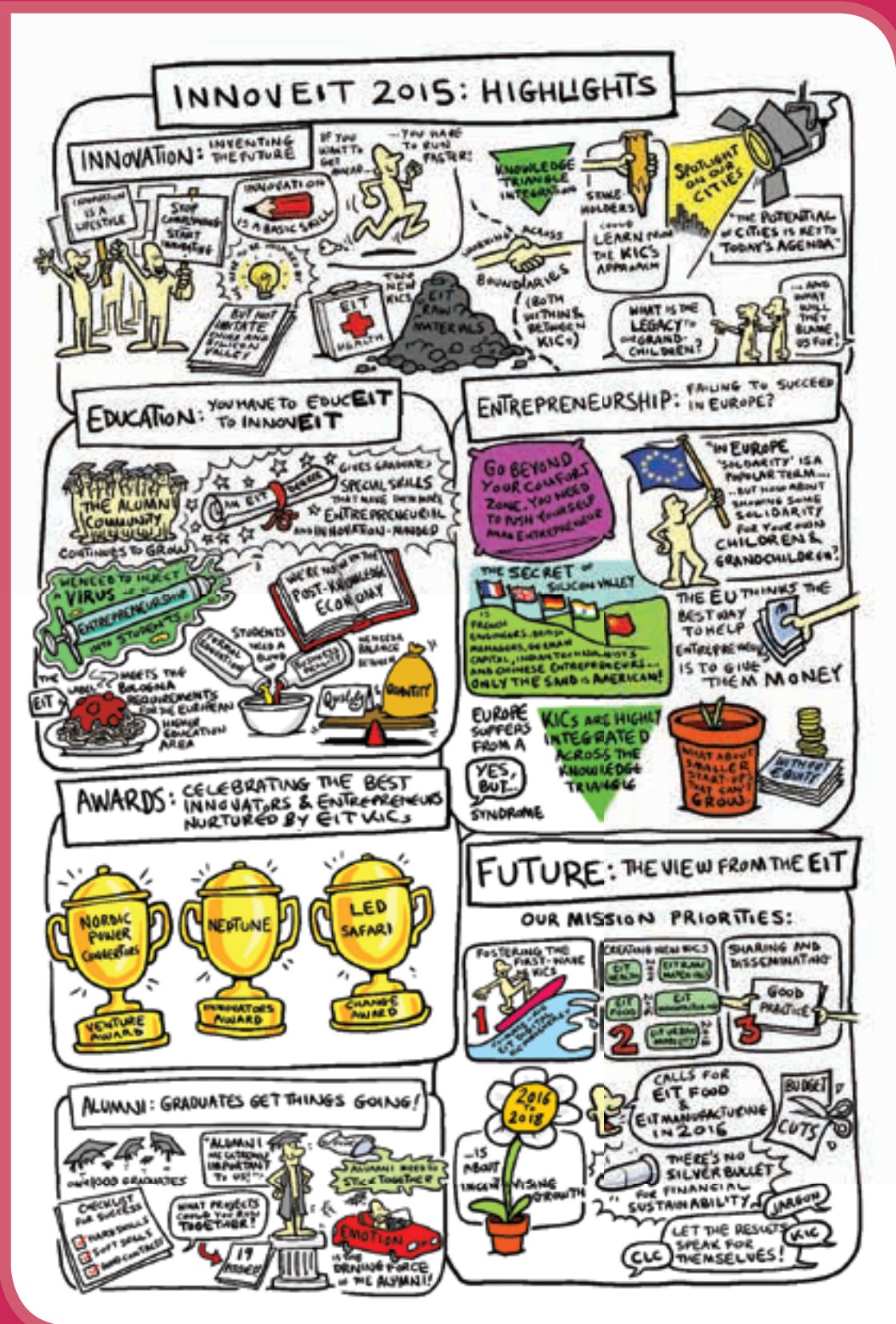
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Executive Summary





Innovation: Inventing the future



József Pálincás, President of the National Research, Development and Innovation Office of the Hungarian government welcomed everyone to INNOVEIT 2015. Describing the 600 people in the room as “the driving force of our common future,” he quoted Dennis Gabor, Hungarian Nobel laureate and inventor of holography, who said “we cannot predict the future, but we can invent it.” Proceedings were dramatically interrupted by a group of student ‘activists’ streaming onto the stage carrying banners, blowing whistles, and waving rattles. This was an entirely constructive contribution and the ‘activists’ were quickly engaged in discussion, and encouraged to explain the slogans and statements they were carrying, such as *Stop complaining, start innovating... Entrepreneurial education for all... and Innovation is a lifestyle.*

Joining a panel to respond to these challenges, Tibor Navracsics, European Commissioner for Education, Culture, Youth and Sport, pointed out that innovation is at the heart of European competitiveness. “Innovation is a basic skill that should be included in the curriculum of schools,” he said. However, it must go beyond



schools to include a reward and support system for innovation that would encourage participation in start-up enterprises, providing a framework for future innovation. Birgitte Andersen, CEO and Co-Creator of the Big Innovation Centre in London, agreed that there is a perception of a lack of both public and private allocation for innovation. "Somehow we're not scaling," she observed, "not because we're lacking start-ups, but because we're lacking 'scale-ups'." For Peter Olesen, Chairman of the EIT Governing Board, the challenge is to change mind-sets that put up obstacles to scaling up. "That's our mission," he proposed, "it's all about culture. We have to be inspired by, but not imitate, what happens in Silicon Valley and in China." The 'activists' agreed that, with the right support, they can 'scale up', as individual innovators and as start-up enterprises.

Corinne Vigreux shared her story as co-founder of satellite navigation company TomTom. "We started TomTom with four people 25 years ago, and we now have 2,500 people. We're the only consumer electronics company to grow at that rate in Europe," she said. Lamenting the lack of a risk-taking culture in European business, she ended with a stark warning. "If we carry on like this European innovation won't be on the table, it will be on the menu." And addressing the 'activists' she added, "the future of Europe is in your hands – don't waste it".

The CEOs of EIT's first three Knowledge and Innovation Communities (KICs) were pressed on the impact of their still relatively young



communities, their contribution to boosting Europe's innovation capacity, and their results in terms of job creation. Bertrand van Ee of Climate-KIC stressed that the KICs' remit is about getting products to market more quickly. "We do that through the KIC infrastructure – we have the best universities with us, and we marry education with entrepreneurship." Asked how Europe might get ahead of Silicon Valley, Willem Jonker of EIT Digital¹ talked about the need to mobilise European efforts. "If you want to get ahead you have to run faster. Europe invented GSM, we were leading in mobile telephony and computing, but we became too confident." And as Diego Pavia of KIC InnoEnergy pointed out, impact is felt both in the short term and the long term.

The interim CEOs of the two second-wave KICs joined in. Ursula Redeker of EIT Health said "our remit is life, economy, healthcare. We feel we can have an impact on keeping healthcare affordable in Europe." For Jens Gutzmer of EIT Raw Materials, the starting point is that "we're the background for all industries, the sector where it all starts."

A workshop on cross-KIC learning considered topics ranging from working across boundaries and Knowledge Triangle integration to the role of co-location centres and the leadership

needed to drive innovation. The discussion identified many boundaries within and between KICs, some visible, such as geographical boundaries, others not, and emphasised the value of mobility within the Knowledge Triangle as a pragmatic way of ensuring that experts from different components of the Triangle move around. Co-location centres were described as 'enablers', places for facilitating cooperation and identifying opportunities to implement KIC activities. The importance of focusing on the *culture* of innovation not just the *product* of innovation emerged from discussions about the possibility of a cross-KIC approach to identifying innovation competences and skills.

In a parallel session Xavier Prats Monné, Director General, European Commission, Directorate General Education and Culture, looked at how stakeholders could learn from the KICs' unique approach. Contributors considered ways for existing businesses to get involved, how to grow start-ups, whether there should be improvements to the KIC infrastructure, and how KICs can influence policy. For KICs, the key lies in developing and implementing a vision for the creation and upscaling of new businesses. Start-ups need capital, customers, talent, and "technological renewal", which involves creating new products to meet market demands.



¹ EIT ICT Labs was renamed EIT Digital on 1 June 2015.

Contributions from external stakeholders, especially during the EIT Stakeholder Forum, added valuable perspectives on the innovation capabilities of the Knowledge Triangle. Kurt Deketelaere, Secretary General of the League of European Research Universities, spoke about the support of his member universities for the EIT, for the KICs, and for notions of excellence, scaling up, and intensifying. The European Industrial Research Management Association is largely made up of research-based companies in, or with a base in, Europe, leading member Christopher Shilling explained. Naturally it has a strong industry focus, “but we have common challenges and themes, whether the Silicon Valley comparison or the potential lack of ambition in Europe.”



A spectacular demonstration of EIT innovations in practice was presented in day two's theme of 'spotlight on our cities', in which delegates had the chance to visit a collection of 29 examples from the KICs of urban innovation in practice. The projects were presented at a stand-up table, accompanied by an explanatory talk and leaflet, as seen in a quick video taster on micro-video site Vine. EIT Interim Director Martin Kern explained that “the potential of cities is key to today's agenda. That's what our KICs stand for, in relation to housing, education, energy, health, and food security, and in relation to themes relevant to future KICs too.” Annamaria

Simon, Head of the Project Management Department for the City of Budapest, raised a number of relevant issues that are high on that city's agenda, including public transport, security in relation to flooding, and the lack of energy efficient buildings. While acknowledging that “innovation is not the cheapest solution,” she was clear that short-term cost-efficiency must be weighed against long-term impact. Michael Olszewski, Vice President of the City of Warsaw, also focused on efforts to improve the accessibility of public transport and therefore of the city, as well as challenges arising from an aging population.



Martin Powell, Global Head of Urban Development, Siemens, asked what our legacy to our grandchildren will be, “and what will they blame us for?” The answers lie in embedding resilience in urban design. “Ultimately, it's global boundaries that are changing,” Wolfgang Teubner, Regional Director Europe, Local Governments for Sustainability, ICLEI, asserted. Yet in trying to avoid catastrophic climate impacts we limit ourselves to targets that we know we're going to miss. It's not just a question of efficiency, but also requires societal transformation that goes beyond technological advancement.



Education: You have to Educite to Innoveit

In several sessions the conference looked at how entrepreneurial education can be integrated into university curricula, how widespread acceptance of the EIT 'label' in relevant Master's degrees at universities across Europe is a possible route to recognized accreditation, and how the internationalisation agenda is another point where the EIT networks can help higher education institutions. For their part, universities need to develop the learning environment to suit the demands of 21st-century employers and markets. The oft-repeated question was how Europe can reproduce the impact of entrepreneurial communities like Silicon Valley and the Boston Area in the USA.





The EIT alumni community – one of the core objectives of EIT’s education agenda – will continue to grow in size and influence as more young innovators and entrepreneurs join the existing network of over a thousand graduates. The support provided by the EIT to these students comes with some expectations too. The EIT-labelled degrees give graduates access to special skills that make them more entrepreneurial and more innovation-minded. The hope is that they will make use of them wherever they go, whether they become employees in large businesses, owners of their own start-up companies, or in public sector roles where interest in entrepreneurial capabilities has never been greater. This network, the first generation of alumni to come out of the KICs, will play a big part in helping to make universities more entrepreneurial and in linking them with the wider research community and with industry.

Estefania Tapias, President of the Climate-KIC Alumni Association, summed it up well when she said, "if you want to create change agents, you have to go through the education system." Or as Endika Bengoetxea, a senior education officer in the EIT partnerships unit, put it, "we need to make change more effective by injecting a virus of entrepreneurship into students so that they can infect their teachers and bring about change." Emphasising that the Knowledge Triangle is a means to an end, Willem Jonker described that end as entrepreneurial education. "To achieve that we really need to get our partners engaged – industry with education and vice versa." Rahul Bansal, deputy director of education at Climate KIC, said, "Europe is known for its brilliant education and research institutions, but typically they are geared towards a steady industrial economy – now we're in the post-knowledge economy." He went on to describe Climate KIC's summer schools for Master's students in which they work "in the UN, the World Bank, in Indian slums, in all kinds of places," before bringing what they've learned back to Europe.

An education roundtable set out to explore a set of questions related to the EIT's interests. A scene-setting statement considered that the EIT 'label' for innovation-related education at Master's and at PhD level should become a recognised model and brand to foster entrepreneurship. To achieve this, quality is of the essence and the label meets the Bologna requirements for the European Higher Education Area and at the EIT's own quality criteria. The participation of key universities and businesses is important and the joint programmes of the EIT have, as a matter of course, a strong business component. Invited statements covered themes including the links between quality assurance bodies in Europe in the context of varying national approaches; the prospects for integrating learning outcomes into every European Commission-supported research programme; and a plea for an industry-driven quality label developed in parallel with industry bodies.



Picking up on the last point, a comment from the floor stressed the need for students to have a blend of formal education and business reality, while another highlighted the balance between quality and quantity in relation to the EIT labelling system. The importance of lifelong learning was also raised, with the suggestion that in the future we will use the term 'learner' instead of 'student' because it is less age-specific. It was felt that the EIT has a role to play in creating an educational model in Europe, and teachers need to be more involved in the EIT's events in order to bring about the right kind of change to education systems.

Peter Olesen made a related comment elsewhere at the conference when he said, "we focus on education as a driving force, but also on the structures. What we need is partners across the Knowledge Triangle to take action; that's what KICs are designed to promote. We want the universities to commit to take action, it's all about that commitment." Reporting back from the parallel session on cross-KIC collaboration, Bertrand van Ee also noted that in order to develop an entrepreneurial mind-set among students, "we need to go back to early stage education, and reach out to 10-year-olds. But then some people said that's way too old, we should start at 5 or 6!"





Entrepreneurship: Failing to succeed in Europe?

In her frank and inspiring presentation Corinne Vigreux had stressed the level of confidence that is required to deal with failure and, “go beyond your comfort zone. You need to push yourself as an entrepreneur and know how to be resilient.” TomTom is always on the lookout for talent and entrepreneurial spirit, either among people running their own businesses or working within other organisations. The point is, she said, “we recruit for cultural fit.”

A comparison of the innovation landscape as seen from a US and an EU perspective also focused on the question of cultural fit between entrepreneurship as a function and the societies which seek to benefit from its potential. Charles Wessner, Professor Adjunct at Georgetown University, presented a US view. “In Europe ‘solidarity’ is a popular term,” he noted, “but how about showing some solidarity for your own children and grandchildren? You’re not going to do that with ever-larger pensions and health care costs.” The better route is investing in the future, and the US can claim assets including an openness to science and innovation, positive social norms, entrepreneur-friendly policies,





and a strong intellectual property regime. But he also wanted to challenge the myth of American exceptionalism. “The secret of Silicon Valley,” he told an expectant audience, “is French engineers, British managers, German capital, Indian technologists, and Chinese entrepreneurs. Only the sand is American.”

A responding statement from the European perspective by Ernő Duda, President and CEO, SOLVO Biotechnological Ltd, picked up on the cultural issues about role models in society, especially for young people. “Many youngsters will tell you that their dream job is to work for the government or a large organisation,” he said. “The image of the entrepreneur is marred by the feeling that they are trying to make money off other people.” The attitude in Europe, even among venture capitalists, is that they don’t support anyone who’s failed. But in the US you need to show you can fail; some investors will *only* back entrepreneurs with at least one big failure on their CV. The EU is still at a stage where they think that the best way to help entrepreneurs is to give them money. The grant system has an important part to play



in risky R&D in particular. But the framework in which entrepreneurs can set up and conduct their business is of greater importance. For example, employing people in the US is based on the principle of 'employment at will', but in the EU it's the most regulated contract there is. "So don't give us cash," Ernő Duda concluded, "create an environment where we can work." Charles Wessner added that Europe suffers from a 'yes, but...' syndrome. Europeans want growth, venture capital investment, and a start-fail-start culture, but aren't prepared to change the regulatory environment or loosen employment laws.

A roundtable for the investment community looked at ways to facilitate financial support for entrepreneurs, particularly in the form of venture capital. The prospect of KICs becoming the owners of an EIT-sourced investment fund was also a major consideration. In setting the scene, an important point was made about the complexity of the political, regulatory, and market context in Europe which must take into account 28 member states, 23 official languages, centralised and decentralised political systems, and on-going financial crisis. But crisis is good for entrepreneurship, because it creates opportunity. Over the last ten years, on average, deal flow has been stable and funding has increased slightly, so it could be said that the context is improving. However, the gap between Europe and other regions, mainly the US, is increasing faster. The EIT KICs' relations with the investor community is largely a question of balancing cooperation with the competitiveness that is characteristic of the investment world. KICs are highly integrated across the Knowledge Triangle as well as geographically, being pan-European, but building an effective eco-system is vital, hence the interest in the Silicon Valley model.

Invited statements challenged the notion that venture capital (VC) is a panacea for entrepreneurs' ills. The average VC fund lifetime of 12 years is short in the world of innovation, so VC cannot be a solution for every company. Also, the VC landscape is complicated, with different players and processes in different sectors and stages of funding. Two fundamental problems were also raised, first that there is no



proven model for solving early stage management issues; and second, vis-à-vis KIC support, there has to be some way of sharing risk. There's a quality assurance opportunity, to filter and improve the quality of the inflow, because if something is never going to be VC-able it should be weeded out. There is also a potential opportunity for the EIT in cross-sectoral and geographical facilitation.

Discussion ranged across general, specialist, and technical aspects of the investment scene. What's needed is more investment firepower and more co-investment capacity for pan-European companies. The suggestion was that the EIT is best placed to provide a platform, especially in early stage management. But many questions were raised about the idea of an EIT-supported fund, such as what size and type of fund it would be and what type of investment model it would pursue. If the business model that goes with it necessitates being an investment management company, that would entail the appropriate registration and regulation. What about smaller start-ups that are sustainable, providing 30 or 40 jobs, but can't access equity to grow? Could this fund be used to trigger further public funding?



According to one contributor we're looking at EUR10-20bn for the creation of sustainable investment funds of the type under discussion. The key is enabling mutually beneficial relationships between business, administrative powers, researchers, and the public. It's also important to be aware of the amount of money available to the 270 or so regions across the EU which have the chance to invest in financial instruments. A note of caution was sounded about the fact that a lot of investing connected with local funds comes with strings attached and it's best to avoid any strings that are not market standard. Perhaps counter-intuitively, one participant concluded that EIT should not contribute in its own right to this relationship because of the sector-based nature of the KICs. Those sectors have to build the excellence that will convince external investors. So what the EIT can do is collect and share best practice and develop clear terms of engagement with the VC community.



Awards: Celebrating the best innovators and entrepreneurs nurtured by EIT KICs

The EIT runs three prestigious award schemes which cover the three areas of the Knowledge Triangle. The EIT Venture Award is linked to the business creation and start-up nurturing activities of the KICs; the EIT Innovators Award is linked to KIC innovation activities; and the EIT CHANGE Award is linked to the education activities, as alumni are graduates from EIT labelled educational programmes.

Peter Olesen introduced the award categories and this year's focus, on the teams behind the nominated innovations, during the course of the conference. The trick, he said, is "combining entrepreneurial spirit with addressing societal challenges." How did the nominated innovators go about getting the idea, putting the team together, linking the corners of the Knowledge Triangle, and – crucially – creating a convincing business model? He also welcomed INNOVEIT delegates attending the EIT Awards celebration ceremony to a very special evening at Budapest's fabulous Bálna centre.





The Venture Award is judged on the basis of six criteria; commercial, technical, financial, societal, the quality of team, and the quality of pitch. The decision was unanimous and the judges even agreed they would put their own money in. The winner was Nordic Power Converters, Regnar Paaske accepting the award for his company's development of power converters that are five times smaller, half the cost and 2 to 5 times longer lasting than current power converters used in, for instance, LED lighting and chargers. The product is outstanding, the jury noted, has a great team behind it, and will deliver societal benefits to all.

The choice was very difficult for the Innovators Award jury. The nominations were for projects which could all break through to market. But the jury had to choose one, and made their decision because of their impression that one project had gathered a diverse team and overcome significant obstacles to build something very special. The winner was Neptune, a cost-effective, accurate, and versatile wind speed measurement system. Accepting the award,

Rajai Aghabi said "we want to commercialise this product and see all the hard work pay off. In the end the difference was the effort of every single member of the team – and not just the project team, the KIC as well."

Martin Powell of Siemens chaired the jury for the EIT CHANGE Award, sharing with the room his view that while all the candidates had shown incredible commitment, passion, and desire, one had demonstrated "a slight incremental excellence" in all the judging categories. "It's incredible," said Govinda Upadhyay, stepping up to accept the award on behalf of his project LED Safari, "we worked so hard for this for the last two years." He went on to pay tribute to his team members and their ambitious plan to eliminate kerosene and other harmful energy for lighting in developing communities.

Details of all the nominees can be found in the brochure *EIT Awards 2015 Nominees*.



Alumni: Graduates get things going



With over 1,000 graduates from EIT-labelled MSc and PhD programmes the EIT KICs boast an alumni network that is a significant factor in the development of entrepreneurship as both an aspiration for, and a product of higher education in Europe. “You’ve been invited because of your experiences, which are shared across the KICs, and as an example of the added value the EIT creates,” Martin Kern told students and alumni in opening the EIT Alumni Connect event. “Grow the network, share your experiences, and help us to drive innovation and entrepreneurship in Europe.”

Jeroen van der Veer, former CEO of Royal Dutch Shell and member of the EIT Governing Board, joined the meeting to share his checklist for success, based on three things: ‘hard skills’, which are learned at university, or in a trade; ‘soft skills’, like good communication and having good relationships with colleagues; and good contacts. Highlighting the importance of strong values to successful leadership he said, “a leader must have followers or they’re not a leader. Make authenticity and integrity your core values and be a role model.”



Students and alumni were then asked to consider what projects they could run together, discuss them in groups, and pitch them to everyone else. Intensive discussion and interaction followed, in which each table became a start-up office in microcosm, with teams forming and ideas flowing. The groups chose their spokespeople, and the 19 pitches included many potentially viable and valuable projects. A sounding board comprising Cyprus University of Technology Rector and EIT Governing Board member Elpida Keravnou-Papailiou, EIT policy officer Nadja Dokter, and keynote speaker Jeroen van der Veer offered feedback on the proposals, all agreeing that the overall quality was high, making it hard to pick out individual projects for recognition.

Elpida Keravnou-Papailiou and Nadja Dokter returned to the EIT alumni community discussion later in one of the workshops. They were joined by leaders of three of the KIC alumni networks, and Nadja Dokter took the opportunity to reiterate the EIT's vision of a self-sustaining alumni community. For Elpida Keravnou-Papailiou the integration of alumni

activities with the EIT mission is of strategic significance. Delivering more of this activity will create visibility for the alumni and gain a critical mass that will contribute to the further development of the EIT. Estefania Tapias reported back to the conference in plenary, and in response to her report Martin Kern was quick to stress that "alumni are extremely important for us." The ultimate measure of success, he suggested, is "whether we have changed the mind-set, changed the lives, of students and alumni." Alumni need to "stick together", said Birgitte Andersen, to make a success of the network-building which is typical of university alumni groups. Estefania Tapias added that "emotion is the driving force of the alumni, that's why we're still together working together, volunteering, and trying to push things forward."



Future: The view from the EIT

Martin Kern rounded off INNOVEIT 2015 with a forward-looking presentation, tackling the upcoming call for new KICs and the strategic outlook for EIT as a whole. There are now some 760 partners for the three first-wave KICs and two second-wave KICs; 1,028 graduates from EIT-labelled courses; 1,141 business ideas incubated; 205 startups created; and 280 new or improved products. These impressive results can be characterised under three headlines: creating interconnected knowledge hubs; breeding entrepreneurs; and attracting investors.



The EIT triennial work programme for 2016 to 2018 is about incentivising growth, enhancing impact and ensuring sustainability. Looking beyond 2020 new delivery mechanisms and results-oriented monitoring will support the continuous drive for excellence. Developing a joint agenda with KICs will help cut the administrative burden and facilitate easier reporting and planning. In addition, an improved monitoring system will make it easier to review performance against KPIs.

For 2016, calls will be published for the next KICs – EIT Food and EIT Manufacturing. The EIT will share as much information as possible from the outset on what the call will look like, including three areas that have been improved since the 2014 call. The first is simplification, to make it easier for people previously uninvolved with KICs to understand the process and apply. Second, there will be adjustments to the terminology and tools available under Horizon 2020. And third, the focus will be even more on excellence. The criteria and framework of guidance will be published in Q4 of 2015, followed by the launch of the call in Q1 of 2016. Dissemination and outreach activities will continue intensively through various channels, including publications, the EIT web site, social media, conferences, awareness days, and the regional innovation scheme.

A contribution from the floor explored the notion of financial sustainability. Martin Kern replied that financial sustainability had been planned in from the start with all the KICs, in line with EU regulation. "We've set up principles of financial sustainability to create a framework," he added, "these were adopted in March and are public, and will be shared further. They form the basis for existing KICs and new KIC applicants to think about." There's no 'silver bullet' solution for financial sustainability and the KICs all have different strategies, but anyone entering the call needs to "have this on their radar from day one."

The next contribution suggested the EIT should let results speak for themselves instead of hiding them in the complex language of CLCs and KICs and Knowledge Triangle. Mathea Fammels, acting Head of Unit, Policy and Communications, responded by saying that the



EIT's long-term strategic planning identified outreach and dissemination as top priorities, and terms and concepts will be clarified. The EIT will also ensure the widest possible distribution of results, tangible outcomes, showcasing selected case studies, and sharing best practices, "so that the wider world learns about the exciting outcomes and societal impacts we achieve." A third contribution focused on the Juncker plan, and the expectation that there would be some changes in the KIC call timeline. Martin Kern noted that budget cuts will mean a reduction of activities, and that is obviously a particular issue for the current KICs. Business plans will have to be adapted. The reduction should also be an incentive to attract additional funding and make steps towards financial sustainability.



Appropriately enough for a conference on innovation that draws a triangle between industry, research, and education as its orienting metaphor, INNOVEIT 2015 began in a room named for Hungarian composer Béla Bartók. His innovation in combining the folk melodies of his native land, the influences of great compatriots such as Liszt, and the originality of his own musical storytelling forms an analogous triangle.

As the conference ended it was hard not to think back to where we began, and recall that the complexity and intensity of Bartók's work made it a struggle for him to gain acceptance in his early career. However, he – and the music-loving public – persisted, ultimately enjoying the rewards of their investment in that very complexity, as his works came to hold an important position in twentieth-century music. The analogy with the world of the EIT and the KICs is not lost on us.

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