

INNOVATION AND ENTREPRENEURSHIP

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José Manuel Barroso during a visit to Hungary in September 2014. [European Commission]

Audit shines light on EU's attempt to mimic America's celebrated MIT

The Court of Auditors has issued a humbling review of the European Institute of Technology (EIT), tainting the legacy of José Manuel Barroso, the former President of the European Commission, who spearheaded what was initially intended a showcase EU project.

The EIT was created in 2008 with the aim of bringing together the worlds of academia, research and business in what is known as the "innovation triangle".

Hundreds of European start-ups have already benefitted from EIT funding in the areas of climate change, energy and information technology.

But the EU agency "is impeded in its effectiveness by a complex operational framework and management problems", auditors said in a report, published earlier this month (14 April).

Participating businesses have complained that the partnerships established by the EIT — so-called Knowledge and Innovation Communities, or KICs — were driven too much by the needs of universities rather than the marketplace.

"Projects were frequently abandoned or did not lead to tangible results," the report said.

"While the main reasons for setting up the Institute were well-founded," the auditors concluded that "a number of important changes are needed" in order for the EIT to deliver on its objective.

The court's tough assessment is an embarrassment for the European Commission, which obtained a spectacular increase in the EIT's budget. From a "mere" €309 million in the EU's previous multiannual budget (2007-2013), the EIT's funding was multiplied eightfold to a whopping €2.35 billion in the current budgetary period, which runs from 2014 to 2020.

Barroso's brainchild

The brainchild of former Commission President José Manuel Barroso who first floated the idea in 2005, the project ran into difficulties as soon as the proposal landed on the table of national leaders.

Initially conceived as a European version of the Massachusetts Institute of Technology (MIT), complete with a campus and world-class instructors, the EIT's ambitions had to be dramatically scaled back after sceptical EU countries watered down the proposal.

Faced with member states' reluctance, Barroso fought tooth and nail to keep his idea alive. And as often happens with big European projects,

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the end result was a complex setting: A headquarter located in Budapest (after the usual bickering between national capitals), no campus, but a series of “co-location” centres for virtual networks of businesses, research institutes and universities working in so-called Knowledge and Innovation Communities (KICs) set up as autonomous entities that auditors say are subject to “unnecessarily complicated” reporting requirements.

For EU auditors, the conclusion is clear—it is the entire “design” of the EIT which needs to be reconsidered.

“If the EIT wants to become the groundbreaking, innovative institute it was originally conceived to be, significant legislative and operational adjustments are required,” said Alex Brenninkmeijer, the Member of the European Court of Auditors responsible for the report.

To be fair, a large part of those criticisms are not new and refer to the early days of the EIT.

An independent report published in 2011 had already highlighted teething problems, pointing to “inefficiencies” in the EIT’s management. “Tensions” soon emerged between the EIT and European Commission staff in charge of supervising the Budapest-based agency, leading to “misunderstanding, frustration and inefficient behaviour”.

Structural problems

However, the agency’s structural problems have remained largely unaddressed, according to the European Court of Auditors, whose mission is to ensure EU taxpayer’s money is being wisely spent.

“Seven years after its inception, the EIT is still not fully operationally independent from the European Commission,” the auditors remarked, saying “this has hampered its decision-making.”

At the centre of the report are the three Knowledge and Innovation Communities (KICs) launched in 2010 in

the areas of climate change, energy and information technology. Although KICs are designed to function as autonomous entities, they have been hampered by paperwork.

The first three KICs currently comprise over 500 partners — universities, research centres and private companies — each of which are required to produce yearly financial activity reports to secure funding for the following year. This implies lots of red tape and less time to deliver, they complained. It also adds uncertainty for KIC partners who have no guarantee that their activities will be prolonged for more than a year.

These administrative problems are featured prominently in the auditors’ report, which recommends removing certain funding conditions imposed on KICs, and “alleviate the operational and financial reporting burden of the KIC partners”.

Commission wants ‘more efficient’ management

The European Commission, which oversees the EIT at political level, recognises weaknesses in the way KICs have been managed until now.

“The administrative capacity sometimes lags behind,” admitted Tibor Navracsics, the EU Commissioner in charge of Education, Culture, Multilingualism and Youth responsible for supervising the EIT. In an effort to address these problems, he said an expert group was set up at the end of last year to reform the agency.

The reform process has been launched and will start bearing fruit in the coming months, Navracsics promised. “I would like to see a more efficient and compact administrative centre,” he told EurActiv.com in an interview, announcing a new management structure will soon be in place.

“I know that the initial funding period was probably a little bit slow and complicated, but now I think we are on the right track,” he claimed.

Auditors applauded the decision to review the EIT’s management but said promises must now be followed by “real action, not just words”.

The Budapest-based agency “still has a mountain to climb,” said Brenninkmeijer, who was appearing before the European Parliament Committee on Budgetary Control last Wednesday (20 April).

“The EIT is under-staffed and has been poorly managed. Its funding is based on a poorly defined concept; its claims to have a leverage effect are undemonstrated and implausible,” he said. What’s more, he said, few of the five KICs already established are likely to reach financial sustainability.

The court’s harsh assessment is disputed by the EIT’s Interim Director, Martin Kern.

“Financial sustainability of the KICs was never meant to be achieved in the first few years, so we think the court’s opinion is quite premature,” Kern told EurActiv.

Kern also pointed to issues that have already been solved, saying there is broad agreement, for example, to extend the annual budgetary cycles of the KICs. But he said that other parts of the recommendations in the auditors’ report will require passing new legislation, a process involving the European Parliament and Council which always takes time.

Until those changes are implemented, the EIT is likely to run into criticism from the European Parliament next time its budget comes to a vote. Last year, MEPs warned the agency must prove its funds were well spent before approving its accounts.

“The EIT is a long-standing administrative and financial problem,” the EPP-affiliated German MEP Ingeborg Graessle (CDU) told reporters last year, as Parliament again delayed approval of the agency’s budget.

The EIT will be subject to a review in mid-2017, spanning all aspects of its organisation.

INTERVIEW

Navracsics: EIT must be 'more visible, more transparent and more compact'

The beginnings of the European Institute of Technology (EIT), created in 2008, were “probably a little bit slow and complicated,” admits Tibor Navracsics, the Commissioner overseeing the EU’s flagship innovation agency. But things should be back on track soon, he told EurActiv.com.

Tibor Navracsics is the European Commissioner for Education, Culture, Multilingualism and Youth in the Juncker Commission.

He spoke with EurActiv’s Publisher and Editor, Frédéric Simon, ahead of the publication of a report by the European Court of Auditors which highlighted “inefficiencies” related to the EIT’s “complex framework”.

The EIT was a project launched under the Barroso Commission, which you inherited. What were your first impressions about the EIT when you arrived in your position? After all, it’s not the most obvious part of your portfolio...

I became familiar with EIT back in Budapest. Actually, as a politician I had some contacts with the EIT back then.

The original idea was a very good idea. If we want to tackle our problems with competitiveness and Europe’s position in the global economy, then we have to put the emphasis on innovation, on bringing together stakeholders interested in innovation



Tibor Navracsics [European Commission]

and competition. The EIT’s main profile was to establish ‘KICs’ (Knowledge and Innovation Communities), based on the knowledge triangles.

I know that the initial funding period was probably a little bit slow and complicated, but now I think we are on the right track, the EIT has established five KICs so far, each of them managing very important issues from ICT to energy to climate issues. It is just speeding up and making more and more significant contributions to European competition.

The Juncker Commission took €350 million from the EIT’s budget last year to fuel the European Fund for Strategic Investment (EFSI). This didn’t sound like a wholehearted endorsement for the EIT on behalf of the European Commission. What was the rationale behind the cut?

It was a wholehearted endorsement, actually. Strangely enough the €350 million that have been cut can be seen as a sign of its success or at least of its potential. When we looked for financial instruments for financing the EFSI, we looked for points where future success and potential contribution from private partners could be easier and more profitable.

In this sense, the EIT is an optimal meeting point of private capital and the institutions, in terms of academia and investor interest. That is why one of the priorities is education.

For us, EIT is not just for competition, it is a member of the research and education family of the Commission. I

think that is why it was an optimal point for investment even before the EFSI and now within the framework of it.

In 2011, an independent evaluation of the EIT identified “inefficiencies” in the implementation of its mission and staff who were “ill-suited” to the job. The Court of Auditors is now expected to issue a report about the EIT in April. How much progress do you feel has been made since 2011 to address those problems?

I’ve been in office for one and a half years, one of my first priorities was to make my two research institutes – the Joint Research Centre (JRC) and EIT – more visible, more transparent and more compact. That is why I am really looking forward to cooperating with the Parliament and Court of Auditors in improving the machinery of the EIT.

Moreover, I established an expert group with highly respected professionals from five countries at the end of last year and it’s supported by the EIT governing board. We, together with the acting management of the EIT, opened a new chapter in the organisation and development of the EIT, because it’s interesting that while the professional performance is high in quality, when it comes to KICs, the administrative capacity sometimes lags behind.

So I would like to see a more efficient and compact administrative centre and background, and we have

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the best hopes that in the near future, with the support of the governing board and the endorsement of the acting management, we will reach that goal.

What kind of time frame do you put on this? When will those reforms start applying and bearing fruit?

First, we will have a call for new management, as we have an acting management structure in place at the moment. It's under way, the expert groups are working on the report, the governing board are in an intensive interaction with the expert groups.

The reforms have been launched and the administrative reforms will be in effect in a few months.

Are you confident about the Court of Auditors' report? What are your expectations?

I'm sure that the report will point out some of the past problems, but I hope that the auditors will support our reform steps.

Last year, members of the European Parliament budgetary control committee refused to sign off on the EIT's accounts for 2013. Many critics in the European Parliament believe the EIT has been too slow to deliver. What is your response to them?

I can't speak about how it was prior to when I took office, but we have a very good relationship with the Parliament's ITRE Committee, which is chaired by Jerzy Buzek, who has been one of the staunchest supporters of the idea of EIT. They are supporting us in this new chapter in EIT.

I think they were right: in the past, the administrative structure of the EIT wasn't transparent enough and, probably due to the complexity of the first phase of the evolution of the KICs and EIT itself, we really missed out on

tangible results.

Now, we have tangible results. We are supporting start-ups, which can bring very innovative solutions and tangible results: smart thermostats, traffic and public transportation, driverless systems, and higher education programmes, are just some examples.

I hope the MEPs are realising that there is an acceleration process happening in the EIT's activities now.

The chief executives of the five existing Knowledge and Innovation Communities (KICs) sent out a letter last September to the Commission. They complained essentially about two things: (1) Plans for shared accountability among participants in each of the five KICs; and (2) IP rights management, which the Commission wants streamlined, whereas before it used to be managed independently by the KICs. What are your answers to these concerns? Have they been addressed?

Yes, we are in constant contact with them. This year, we are launching two more KICs so we are interested in learning from their experience.

They were right, we have to clarify the lines of responsibility, because we want to develop synergies between the KICs. For instance, we have KICs on energy, raw materials and climate. Those KICs can work together far more efficiently to create even more comprehensive solutions for the future, so we have to clarify responsibilities.

Intellectual property rights, however, are far more complicated, because we are working on the digital single market strategy. Plus, the creative industry, which belongs to my portfolio, is also very prone to intellectual property issues. We have to deal with these concerns and find solutions.

How do you reconcile the wish of KICs to set their own arrangements when it comes to intellectual property (IP) rights and the Commission's desire to see a more streamlined process?

We have to find a good solution for that. But the solution won't be to go backwards. At an elementary level, KICs are performing very well, so it is our duty to help them put together their knowledge, expertise and competencies, in order to find more comprehensive solutions, bringing them together through synergies. Of course, we have to clarify all the issues that might impede this.

Looking ahead, two more KICs are going to be added to the current list: on food and added-value manufacturing. Can you outline the objectives of these two new initiatives?

First on food, which is the most self-evident: Healthy food is one of the most important issues these days. So the food KIC will address the most important issues in keeping up a good level of production of high quality food.

In terms of value-added manufacturing, it is another KIC which emphasises the importance of high quality, sometimes but not necessarily small-scale production, with an innovative profile. I think that this KIC will have a strong regional profile. There is a limit of 50 participants in the KIC, which is quite a significant number of companies or enterprises. I think a kind of innovative manufacturing can give an important economic profile to a region, where the participants of the KICs are.

I hope it will be a really innovative phase of European manufacturing and that is why we will be funding these start-ups, entrepreneurs, ventures etc., that add to Europe's competitiveness through innovation.

Carlos Moedas recently announced the creation of a European Innovation Council. This has triggered worries that there could be a duplication of roles with the EIT. How will you both ensure that this doesn't happen?

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The first safeguard is that I am very good friends with Carlos Moedas, so we can go to each other and solve problems very easily.

The second, is that while the EIT gives institutional and educational support to entrepreneurs and the knowledge triangle, the EIC, as I understood, will be an advisory body of research activities outside the EU institutions.

There are already strong links in place between that body and the JRC and EIT, even now. They will contribute to the EIC's activities, providing advice where appropriate. I hope that they will be a natural institutional background to the functioning of the EIC.

And the same will happen the other way round?

No, as I understand it, the EIC will concern itself mainly with Horizon 2020 activities and they will investigate in some strategy issues for the future, while the EIT and JRC can bring knowledge, skills and experience underpinning their strategic opinions on these issues.

The EIT will be subject to a review in mid-2017, spanning all aspects of its organisation. What are the main issues that you will be paying attention to?

I would like to endorse EIT's position among the top quality research and education institutions around the world. We, for example, have had very good results in education, for instance the Forbes 30 list. In terms of social innovators, we have five former fellows, institutes etc. on the list.

The EIT's KICs are well-respected and well known. So I would love to endorse those results. On the other hand, I would like to develop an even stronger profile on PhD and Masters courses. I would also like to see closer cooperation and collaboration within the EIT, between KICs, and externally, between the EIT and JRC. I would like to link them more

closely together, because I hope that even better results could appear from that synergy.

Some KICs were recently rebranded to include EIT in their actual name. It turned out that some of them were actually unaware they were even affiliated to the EIT...

That is a pity. I would say that in the initial phase, that is a problem that can easily be cured.

Yes, we need better visibility, probably a more unified brand of the EIT, with fundamental respect to the scientific research of the KICs, but when we negotiated with the European Investment Bank on future EFSI projects, they remarked that the whole structure of the EIT is so elusive, so blurred, that the streamlining process probably gives sharper contours to the whole institution.

So you are going to continue in this direction in the coming years? How are you going to go about this?

Again, mostly administrative tasks. We have to make the administrative centre more, I would say, PR-orientated or more visible. We have the traditional EIT "InnovEIT" Days in April, which is a good opportunity for showing off our results and putting the institution out there.

We had, about two months ago, the first info days here in Brussels, which were very successful. Just like the JRC, which is coming out of the background of the Commission, the EIT will find opportunities where it can put itself into the limelight.

Peter Olesen, the current director of the EIT board, told us in an interview last year that, in the end, assessing impact will be about whether the EIT has contributed to economic growth and job creation, as well as fostering a more entrepreneurial mindset in Europe. What metrics should

be used in your view to assess the EIT's success? What will happen if the objectives are not met?

We can talk about measurements in two ways. The first is more direct: how many jobs have been created by the support or framework of the KICs? For instance, with the start-ups, a French start-up created 50 jobs. In indirect terms, there is the overall influence and shaping of the mood of the economic life of Europe.

If you consider the 1,000+ master's and PhD degrees that were undertaken within the EIT framework, its measurable influence is even more significant. So, I am optimistic, if we make the necessary steps in the coming months, in restructuring and making the administrative capacity more efficient, the KICs and EIT will be successful by 2017.

A more personal question, if I may, on a completely different subject. Hungary, your home country, has been singled out by the Commission in terms of its management of the refugee crisis for re-instating border controls and erecting a fence. As a Hungarian and a member of the Commission, how did that make you feel?

As a Hungarian: I love my home country. As a member of the Commission: we launched a new core within the framework of the Erasmus+ programme, which helps those NGOs and institutions that contribute to the integration of refugees, also online. But I am loyal to the Commission's position.

Do you think the criticism was fair? Was the Commission not overstepping its mandate?

I'm now concentrating on education's and culture's contribution to the integration of refugees, trying to help the Commission and Hungary in coping with this crisis.

Commission backs data sharing 'by default' to spur innovation

The European Commission's upcoming data initiative will establish open data as the paradigm "by default", while allowing opt-outs only in restricted cases for commercial purposes, Commissioner Carlos Moedas told EurActiv.com.

A new wave of entrepreneurs in fields such as health and energy efficiency have demonstrated the importance of data sharing — not only for businesses, but also for research communities working to enrich innovation across Europe.

The work of some of them, like Norbert Kuipers, were recognised during the 2016 European Institute of Innovation and Technology (EIT) award ceremony on 25 April.

Kuipers, who runs a business turning waste heat into water, admitted the "positive experience" of working in an environment where knowledge is shared while experts and entrepreneurs cooperate along the process.

Data ownership

At the same time, the full disclosure of data generated in some industrial sectors could hamper the development of European digital companies that are already struggling to compete with US-based tech giants.

The European Commission wants to strike the right balance between the principle of open data to fuel innovation and the right to data ownership demanded by the manufacturing sector.

"The emerging issues of 'data ownership', reuse and access to data will



Carlos Moedas [EBS]

have a great impact on the growth of data value chains in the quickly evolving markets in which the goods or services exchanged are data assets," Commission spokesperson Nathalie Vandystadt told EurActiv.com.

"Such data markets will have a potential to enhance innovation and competitiveness and lead to new business models in both traditional and new economic sectors," she said.

In upcoming months, the executive will publish a free flow of data initiative to remove unjustified barriers to the movement of data. It will also seek to clarify legal aspects, as some existing regulations are not fit to handle the exponential growth of data and new technologies to exploit and "monetise" information.

Carlos Moedas, the EU Commissioner in charge of Research, Science and Innovation, said "the idea is that the free flow of data will be open by default". But commercial ideas also need to be protected. Therefore, "there should be opt-outs for people to protect their ideas", he added.

The Portuguese Commissioner explained that contractual agreements could be signed between two parties on

a case-by case basis to fix the terms of access to data and its usage.

"But these opt-outs cannot be defined a priori and they have to be defined very carefully," he said, adding his "ambition" was not to add as many opt-out options as possible.

The executive is currently assessing the flaws of existing rules and consulting with stakeholders on how to adapt the existing framework to the data age.

The aim is to clarify the contractual practices used by companies working in the promising field of data markets.

Unlocking data

The European Commission is also looking at justifications for exclusive exploitation right to data and whether the open data paradigm can be expanded to data held by private companies.

Vandystadt explained that EU authorities are considering how to improve access to data owned by the private sector by passing new legislation or by other means.

"Actors within the nascent data value chains will need predictability and

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legal certainty in order to develop new business models, notably in the fields of cross-sectorial data aggregation, cross-sectorial data analytics, data trading, data brokerage or the pricing of data," she said.

The Commission intends to put forward this initiative in the coming months, although the date remains to be confirmed.

Moedas defended the open data paradigm on Monday (25 April) at the Hannover fair in Germany. "Future economic value, and future solutions to global challenges, will not come from keeping data locked away," he said.

"For European industry to remain relevant in the digital age, we need to leverage data. We need to unlock its vast economic value. We need open data for open innovation," he told the audience.

Unauthorised uses

But the industry is also wary of any provision that could violate the economic interests or could lead to unauthorised uses of the data.

"A one-sided focus on 'free data' without taking the economic and competition-related value of data into account would be wrong and could lead to fundamentally incorrect orientation in industrial policy," VDMA, Germany's mechanical engineering association said in a position paper last January.

Other groups, on the other hand, argue that a restrictive stance on data sharing could harm the prospects of a growing market.

The first European Data Market study by IDC & Open Evidence estimates the aggregated value of data-related products and services exchanged within the EU at more than €50 billion, and is expected to rise to €111 billion in 2020 under high-growth conditions.

Meanwhile, data-driven innovation could have an impact of 4.7% of GDP in 2020 in Europe, up from 1.8% in 2014 (around €255 billion).

'European MIT' will look for innovators in food, industry and urban mobility

The European Institute of Innovation and Technology (EIT) is opening a "new chapter" to overcome some of its early mistakes, and plans to expand by adding food, the digitalisation of industry and urban mobility to its priority areas for supporting new innovation projects.



Tibor Navracsics, wants a more 'open' EIT. [EBS]

Originally conceived as a European version of the Massachusetts Institute of Technology in the United States, the EIT was founded in 2008 in order to support innovation across the EU.

But contrary to the centralised model of the US-based MIT, the EIT adopted a decentralised structure which is now under scrutiny.

"I hope we will overcome the barriers," Commissioner for Education, Culture, Youth and Sport Tibor Navracsics told EIT members gathered in Budapest for the 2016 InnovEIT

conference on Tuesday (26 April).

He said that "it has not been always easy" since the EIT was set up, but he hoped to open a "new chapter", in which procedures would be simplified.

The Knowledge and Innovation Communities (KICs) were forged as the key instruments to channel innovation by bringing together higher education, research and business players.

EIT will increase its research fields by adding at least three new KICs to its arsenal by 2018, the interim director, Martin Kern, told reporters during the conference.

Food and the future of manufacturing will be new innovation priorities in November, while urban mobility will be launched in 2018.

These KICs will come on top of the initial three launched in 2010 (climate, digital and innoEnergy) and the two other communities added in 2014 (health and raw materials).

All of them were selected to find innovative solutions to address some of the most pressing challenges Europe will face in the years to come.

More than 800 partners are already part of the existing five KICs. About 200 startups have been created and 900 business ideas have been incubated.

But for some, adding more innovation areas to the existing ones isn't enough — KICs also need to be more open and more agile.

Paul Rübiger, the Chairman of the European Parliament's Science and Technology Options Assessment initiative, said the EIT should have a "very active role" in launching new KICs. He argued that these knowledge communities should be reviewed every six months.

Meanwhile, Navracsics stressed that the institute should engage more with other actors not involved in the KICs.

"We have to make the results more visible and more tangible [...] to show the success achieved by the EIT" he said.

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Auditors' report

However, the issue of openness and the number of innovation fields are not the most pressing challenges that the EIT is facing.

The EU's Court of Auditors concluded in a report, published on 14 April, that the institute "is impeded in its effectiveness by a complex operational framework and management problems".

Bureaucracy hampers the innovation process, while some funding and administrative requirements represent a burden for the partners involved, said the report, which focused mainly on the first three KICs.

Kern underlined that the progress made in developing the KICs show "we

are open and growing".

He admitted some of the flaws detected by the EU auditors, but he stressed that work is ongoing to correct them.

Operational changes are in the process of being implemented to simplify the procedures, or to focus more on the innovative projects supported by the KICs and their impact.

The EIT rewarded the most outstanding initiatives during the 2016 InnovEIT conference.

Florian Schneider, a Dutch entrepreneur and co-founder of Nerdalize, won the EIT Venture Award for a breakthrough innovation to heat houses with computer power.

The Sweden-based Allen Ali Mohammadi got the EIT Change award

for his accurate, non-invasive and inexpensive tool for the screening and early diagnosis of heart diseases (Hippogriff AB).

Dutch entrepreneur Norbert Kuipers, won the Innovators Award, thanks to his system for using heat waste to generate water and indoor air conditioning.

Meanwhile, the European Commission is working on legislative amendments to get rid of complementary funding, which creates unnecessary paperwork, when determining the EIT's financial contribution to the KICs. One of the auditors' recommendations was to ditch the practice.

Kern admitted that "some reflection" is also needed on how the EIT allocates the resources and design the programmes.

INTERVIEW

EIT boss: 'There is a new focus on measuring results'

The European Institute of Technology has come under heavy criticism from EU auditors, who flagged a "lack of tangible results" in a recent report. But most issues have now largely been addressed, says Martin Kern, who promises a new focus on results.

Martin Kern has been the Interim Director of the European Institute of Technology (EIT) since 1 August 2014, where he is responsible for managing the Institute's operations.

Kern spoke to EurActiv.com's Publisher and Editor, Frédéric Simon.



Martin Kern [EIT]

A recent report by the European Court of Auditors (ECA) flags a series of problems with the way the EIT has been managed until now. However, the report relates mainly to the first three KICs that were launched in 2009. So, problem solved?

The report, as you say, focused on the first three KICs and didn't take into account the latest ones on health and raw materials. Things have moved on since the report and we now have an innovation community of 800 partners across Europe.

The audit, importantly, was carried

out 18 months ago, so the problems it highlights we are fully aware of and have to a large extent solved.

For example, complexity increased as the KICs budgets grew. In July 2015, we started, in conjunction with the Commission, a process of simplification. The task force we set up to carry this out is already operational and has done a lot of work to address the recommendations made by the ECA.

Another recommendation was that we focus on results and impact,

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which we have done, by implementing a monitoring system and changing our indicators.

This has all been done since the audit was carried out, so we are happy with where we are, in terms of the portfolio we have and the awards we have been given. The level of external funding that has been raised is also very impressive.

How many start-ups have been created thanks to EIT funding? How do you measure success?

We've focused on measuring the number of students that have gone through our education system and the number of business ideas that have been incubated and the number of start-ups that have been set up — some 200 in fact.

Now there is a new focus on measuring results, in the form of additional funding and growth. These are the objectives.

What is your objective for growth and jobs?

The EIT's overall objective is very much in line with the Commission's, contributing to growth and increasing competitiveness. We want more entrepreneurial students and new start-ups. Its impact can be seen by the awards that our people have gained and the success stories that have come out of our portfolio.

The report stated that the administrative burden of the KICs and the grants is quite high. How do you deal with this?

Firstly, the EIT has a rather decentralised approach, as the partners are managed by the Knowledge and Innovation Communities themselves.

We deal with them through coordinators, not individually. We are

keen not to have too much inefficiency or complexity, hence our decision to simplify the process last year.

The auditor's report says the way grants are being disbursed to KICs imposes too much bureaucracy on the participants and needs to be rethought. For example, it suggests extending the annual budgetary cycle and reporting period to cover more than a single calendar year. Do you agree?

Indeed, we agree with that recommendation and see the reasons behind suggesting them.

Can the EIT decide this on its own? Or do you need changes in legislation to do that?

Parts of the recommendations require changes to the EIT regulatory framework, which require the support of the institutions—commitment that we already have, I'm pleased to say.

For example, on complementary activities, those which are not financed directly by the EIT or EU funding. Changes to this would need regulatory change. We accept that and we hope it will progress smoothly, but ultimately it is out of our hands, so I can't provide a timeframe.

On the other hand, we've already implemented a number of changes that didn't need input from the legislature. For example, the new framework partnership agreement, which we have already signed. We've already implemented new monitoring strategies and clear rules for governing the KICs as well.

Principles of financial sustainability were also something we could implement ourselves. We also expect to have a plan in place this year on how we can move towards a multi-annual cycle, with an aim of implementing it next year. We see that as an important area in which we can improve efficiency and allow a greater focus on innovation.

Over how many years would that be?

Our current system is already quite flexible, allowing us to react to new innovations in good time. We want to find a good balance between being able to plan in the long-term and maintain this ability to react quickly.

We need good reporting and accountability as well, of course. The analysis that is currently ongoing wants to find a way to preserve all these factors, only then can we say how long the cycle would be.

The report says the financial sustainability of the KICs is doubtful and that "businesses are not involved enough in the KIC activities". How can that be improved?

On this issue, we are not in agreement with the court, one of the few actually. Financial sustainability of the KICs was meant to be a long-term goal. It was never meant to be achieved in the first few years, so we think the court's opinion is quite premature.

I'm personally optimistic that they are on track to achieving it in the timeframe we predicted. It's moving up the priority list as the KICs become more established. The idea is that our results continue and increase, even when the EIT funding starts to be phased out. It's too early to take stock of it.

The chief executives of the five existing Knowledge and Innovation Communities (KICs) sent out a letter last September to the Commission. They complained essentially about two things: (1) Plans for shared accountability among participants in each of the five KICs; and (2) IP rights management, which the Commission wants streamlined whereas before it used to be managed independently by the KICs. What are your answers to this concern? Has it been addressed?

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Again, this has a lot to do with the timeline and when the report was carried out. These issues have now been fully resolved. We already signed the new framework partnership agreement with the KICs, with these issues being discussed with the KICs.

The contractual relationship in regard to Horizon 2020 had to be adjusted, which was carried out. All parties accepted the changes that were needed and we now have a stable framework, allowing us to focus on innovation.

Has the matter of shared accountability been withdrawn or resolved some other way?

There is financial and operational liability. In terms of financial, it was merely a matter of clarifying the situation, so participants in the KIC would only be liable for the amount that they received. There was a degree of misunderstanding here, so just discussing it solved the problem.

Regarding operational liability, there is a need for the different partners to work together within a project. One of the standard rules of Horizon 2020. Again, we discussed this with the KICs and we were able to sign the new framework agreement. So there is shared accountability there.

On IP management rights, the KICs wanted to independently manage that. The Commission didn't seem to want that, so how was it addressed?

Again, it is somewhat of a transition issue, as we move toward Horizon 2020. There are provisions on how the KICs' framework should complement basic criteria governing IPR. Once we explained this, the KICs accepted that the Horizon 2020 framework provides a lot of flexibility, and the KICs have a degree of freedom to manage their IP rights. Again, this allowed us to sign the agreement without any problems.

The EIT has a budget of €2.35 billion for 2014-2020. How much of that money has already been spent? What happens if the money is not all spent?

That budget figure is correct. We expect all of the funds to be absorbed, which will allow us to produce even more results. We have a competitive funding mechanism, meaning the more a KIC produces, the more funding it is given.

That's why these start-up and education figures are so important. We're producing results that themselves produce more success stories. We're rewarding success. The funding we receive is distributed along these principles. And our approach has been

vindicated as we add more KICs and more communities are set up.

Another issue was the high turnover in staff, including at higher management level. Your own position is an interim one. Are you hoping to be confirmed full-time?

On your first point, this is another factor that has been dealt with simply over time. We are nearly fully-equipped and staffed as things stand, which is all important for the fulfilment of our mandate. The situation is much better than how it was when the audit was carried out. I'm very proud of what we have already achieved, as we have addressed and resolved nearly all the shortcomings that have been highlighted by the court.

The location of the agency is in Budapest. How does the relationship with the Commission look? Don't you feel a little bit lonely there?

In fact, it's a great location, as Hungary is so central. As you know, we are pursuing a pan-European network, so it's great for that too. We also have a mandate to outreach to areas with lower innovation capacities.

Our progress so far has seen an increase in stakeholders from Central and Eastern Europe, meaning Budapest is an ideal location to manage that.

INTERVIEW

Ex-DARPA chief: 'Innovation with no goals is not efficient'

Ken Gabriel has dedicated his life to innovation and entrepreneurship at Google, and the Defence Advanced

Research Projects Agency (DARPA). For Gabriel innovation boils down to "satisfying an unmet need".

Ken Gabriel is president and CEO of the Charles Stark Draper Laboratory, an independent not-for profit research institution. Before that, he was director of DARPA and deputy director of the Advanced Technology and Projects (ATAP) at Google. He was the keynote speaker at the Innoveit 2016 conference, hosted by the European Institute of Innovation and Technology (EIT) in Budapest.

Gabriel spoke with EurActiv.com's Jorge Valero.

What were the technologies that came out of Darpa while you were there?

I was in DARPA twice. My first period was in the early 90s, when I was recruited as program manager to start the micro-electromechanical systems (MEMS) program. Then I became director of one of the six offices inside DARPA. After

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that, I left the agency for almost 12 years. I started my own company, that I later sold to Bosch. I was asked to come back to DARPA, first as deputy director and later as acting director.

The things we focussed on during my tenure in the agency was cybersecurity, biotech and biomedicine and hypersonic flights. In regards to personalised medicine, the issue was that we can now read our DNI. That is great but, what do we do with it?

Part of the things we launched while I was there was not only how we analyse the DNA, but how we synthesise from that knowledge. Maybe there is a particular drug or treatment that is good only for you. How do I deliver that in a cost-effective way? Most of pharmaceuticals do not think about individuals in that sense. That fundamentally is an engineering problem from my point of view, not necessarily a biology problem. We also worked in the field of hypersonic flights, flying at Mach 20 (high hypersonic speed), and the challenges associated with it.

What is the secret of DARPA? It is well-known for being a very small team of less than 300 people, with a budget of around \$ 3 billion.

It is really about being mission-focused. Mach 20 is a good example. DARPA did not start a hypersonic technology program. It started a Mach 20 program. Going at Mach 20 is a capability. There is no argument about that. If all we did was to develop hypersonic technology you would say: "Yes, we did some progress in this field." But did I make enough progress to fly at Mach 20? That is a different focus, and that kind of focus is really important.

The other is the organisational structure. The reason why DARPA is small is because it needs to move with speed and agility. For both things to happen, DARPA needs independence.



To me, these are the key characteristics: you need to have independence, a structure that allows for speed and agility and you have to go after bold capabilities, not technologies.

When you compare DARPA with your work at Google, what were the main differences, and what were the results?

Regina Dugan (former DARPA director) and myself were recruited to Google to start the Advanced Technology and Projects group (ATAP). It was different from Google X. The fundamental difference is discipline innovation. What I mean by this is innovation that is disciplined in its execution. There are two schools of thought. I am not saying one is better or worse, but obviously I believe that one is more productive than the other. Google X is more like 'have great thoughts with no particular objective', or just 'do cool things.' That is the typical approach most people take towards innovation. Give smart people loads of money, a lot of time and good things will come out of it. Actually I don't think that is right. You do get good ideas coming from that kind of activity, don't get me wrong. But it is not particularly efficient, nor do you get as much as you could from these kind of investment and people.

The organisation we set up was more like the DARPA model. At Google ATAP, if we hire you in as a technical

project leader, we will tell you: you have two years, and after that you have to leave. Culturally that was very hard for people, and also for Google to accept. They would say: why are you forcing these people to leave? To us, that is a very important part of what works at DARPA and what we have seen elsewhere: the focus on execution and discipline. If you join an organization where you have only two years to get something done, you are very focused. You don't care about your title or the size of your office, or whether you have a parking spot. You are just focused on getting the work done in two years.

There is a lot of talk about a fourth industrial revolution. In your view, what is the most promising technology, or even something that we haven't seen yet and we can expect?

It would be difficult for me to answer that, not because I don't understand the technologies, because we are talking about them as technologies. I have yet to have one of these technologies telling me what unmet need they are satisfying. Only then I would have a better idea of why I would want them. In the case of driverless cars, I can see why they could be useful in terms of congestion and safety. Right now human error is the principal factor for deaths on the road.

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In the case of virtual reality, or any other technology, until someone tells me what fundamental need is being solved, I will not be able to say which one is more promising.

The problem with many of the technologies is that they talk about them as if the technology itself is the reason why you should get it. That rarely works. People, governments, companies acquire technologies because they give them some advantage, they satisfy some unmet need.

The next generation of mobile internet (5G) will be the technology powering this more advanced digitised world. It seems that the US is less involved in developing the 5G network, compared to Europe or Asia. Why?

I don't know any specific ratios or numbers, but I do know there is an increasing attention and demand for bandwidth that 5G is going to solve. This is another example of an unmet need that is going to be solved with innovation. There are many US companies and players working on that. But we are in a connected world, so it is not about what we are doing in the US or what Europe is doing. The result is going to be a collection of things going on.

What specific advice would you have for the EIT?

I don't know a lot about how the EIT is structured or governed. But I do believe that you need to keep organisations that work with innovation relatively small, make as few rules as possible and not try to 'pick the winners'. There is a tendency to say 'we have to get it right' or 'we cannot put money in companies that fail'. People said about DARPA that we were the organisation that encouraged people to fail. That is wrong. No one should fail. What we do is to encourage people not to fear failure. It is a very different thing. That applies to

organisations as well. If DARPA or Google ATAP took on projects that had to be a guaranteed success, then you pull your risk horizon in. That is not necessarily good for an organisation dealing with innovation.

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