

EU Research Trends - March 2015

Several Committees at the European Parliament are dealing with Commission President Juncker's Investment Plan, ESFI. The lead is shared by the Economic Affairs and Budget Committees, where app. 1500 amendments have been tabled. The rapporteurs wishes to amend the governance structures of ESFI and to deal with budgetary issues on an annual basis as part of the annual budget negotiations between Council and Parliament. So far, the time schedule seems to be respected. This is of great importance as the Horizon 2020 work programme for 2016-2017 can only be adopted, when ESFI and its financing from the EU-budget, H2020 budget included, has reach a conclusion.

In this month's newsletter you can read two interviews with the commissioner of research Carlos Moedas, about cuts in the EIT-budget, the Digital Single Market and much more.

Trends

Commission helps EU Member States reform their research and innovation systems

The European Commission has launched a new Policy Support Facility (PSF) to help EU Member States reform their research and innovation policies. Such reforms are a priority for EU economic policy as highly performing research and innovation systems can kick-start renewed growth and job creation. The first countries to make use of the Facility are Bulgaria and Hungary.

European Commissioner for Research, Science and Innovation Carlos Moedas said: *"To exit the crisis and build solid foundations for growth and jobs, all EU Member States face the task of reforming their research and innovation systems. We need to work together to best tackle the challenge of how to identify and implement those reforms that are key to achieving sustainable growth."*

Bulgaria is the first Member State which decided to use the PSF. With the support of the Commission, a panel of senior experts and officials from other governments will conduct a Peer

Review of Bulgaria and make recommendations for improvements to public funding of research, to research careers, and to knowledge transfer between academia and business.

Todor Tanev, Minister of Education and Science of the Republic of Bulgaria, said: *"I appreciate that Bulgaria can be the first official client of the new Policy Support Facility. This instrument will help us with the launch of the reforms necessary to make our research and innovation system more effective, notably as regards its governance. The results of the peer review will feed into the crucial efforts of the Ministry of Education and Science and the government to raise Bulgaria's science and innovation profile and to make it more result-oriented and beneficial to the society."*

The Commission has also already agreed to support Hungary to prepare for a possible Peer Review later in the year. The President of the National Research, Development and Innovation Office József Pálincás expressed his commitment to the new initiative: *"We consider Policy Support Facility a new effective tool under Horizon 2020 which supports us, policy-makers in further improving the existing Hungarian research and innovation policies. By working together with a group of excellent international experts, the pre-peer review and the subsequent peer review will help us in the finalisation of the on-going restructuring of the Hungarian national R&I governance system."*

The Policy Support Facility is a new instrument to give EU Member State governments practical support to identify, implement and evaluate those reforms needed to enhance the quality of their public funding, such as opening up public funding to competition and introducing performance assessments of universities, or stimulating cooperation between academia and business. It supports government officials from other countries to peer review the effectiveness of research and innovation policies and provides access to independent high level expertise and analysis. It is funded under Horizon 2020 with up to 20 million EUR.

The 2015 Annual Growth Survey identifies research and innovation (R&I) as one of the seven priorities for Member State structural reforms to boost investment and growth. It highlights reforms to increase the impact of public funding through improved R&I strategies, programmes and institutions, as well as reforms to ensure an investment-friendly environment to stimulate business innovation.

Europe's research Commissioner Carlos Moedas lays out his ambitions in an interview with *Nature*

Carlos Moedas on European funding models, diplomacy and scientific advice.

Last November, Portuguese engineer-turned-economist Carlos Moedas was plucked from managing his country's budget-cutting austerity programme to take charge of the research portfolio at the European Commission in Brussels.

Five months into his five-year term as research commissioner, Moedas spoke to *Nature* about his hopes and ambitions for the scientific programmes run by the European Union (EU), particularly the Horizon 2020 research programme, which runs until 2020. Moedas wants scientists to change their mentality for H2020, breaking free of individual silos and including more social science. But he is already facing complaints that money is being stripped from the programme to finance other European initiatives, such as the proposed 16 billion EUR European Fund for Strategic Investment (EFSI), a Europe-wide bid to stimulate the region's economy. The following is an edited version of the interview.

What is the best thing about your job?

The great privilege of working day after day with brilliant minds. I've never had such a job. Now I can dream of making the world a better place – generally by contributing to wealth through bringing science closer to the market, and specifically by making life easier for scientists.

How do you answer scientists who are angry that the commission [axed the post of chief scientific adviser](#) last November?

I can promise you that there will be a system of scientific advice and it will be in place by the summer. [Commission] President [Jean-Claude] Juncker has asked me to look for the most appropriate system for the commission – as opposed to the system that works best in the UK, or in any other particular country. I will be proposing a system that allows timely advice to be gathered for all of the Commissioners when it is needed – such as when new legislation is being prepared, or when there is an issue of urgency. The former Chief Scientific Adviser, Anne Glover, has helped me understand what does and doesn't work in the context of the commission.

Scientists are also angry that the Commission plans to [take 2.7 billion EUR from H2020 to finance the EFSI](#). Although some of this might be used to support research infrastructure and

commercialization, how do you respond to suggestions that in practice this money will be lost to research?

I was a bit puzzled when opinion-makers started saying that the money had been lost to science. That isn't the case. The big picture is that we need to increase the total amount of money spent on science and innovation in Europe in the next five years, and it doesn't matter where exactly the money comes from. The EFSI is a way of leveraging more from the European Investment Bank, from Member States or from private investors. Unlike H2020 projects, which are not geared to the possibility of failure, EFSI-funded projects will be high-risk and high-return. They will be attractive to investors because the first investment loss will be carried by the Commission's contributions. Scientists shouldn't be concerned that they would be too small to compete for funds, because EFSI projects can be all shapes and sizes, including research infrastructures.

The two 1-billion EUR [EU flagship projects](#) were also conceived as high-risk, high-return projects. The project to commercialize graphene is [going well](#), but the Human Brain Project is [in trouble](#). Do you think this particular funding model has been too risky?

We believe in both of the current flagships; measures are being taken to correct some of the problems that have arisen, but it is important that they both keep going. We have no plans to launch more on this scale. My own priority is to support our more modest [Key Enabling Technologies](#) projects, which allow us to spread funding over a wider diversity of themes from nanotech to biotech.

What are your priorities?

First, there is the day-to-day implementation of H2020. It is one of the biggest research programmes in the world, and a huge responsibility.

Then there is scientific diplomacy. Fundamental research is a flagship of diplomacy – it is a language of peace, because scientists are not interested in politics, they just want to solve problems. Take one example: we just [signed an association agreement](#) for H2020 with the Ukrainian government. For them it is a bridge to Europe. H2020 is an open programme, so individual scientists even in countries without such an agreement (such as Russia) can participate provided they have the excellence. But a government-level association agreement is different; it involves having a say in the direction of the programme, just as Israel and Switzerland enjoy.

And third, there is the research ecosystem. As an economist, I am aware that every country has to have the necessary framework conditions for science – functioning labour markets, product markets and judiciaries and so on. I spend a lot of time talking to other Commissioners, including those in charge of budgets and regulations, to see how we can improve our own regulations, and encourage Member States to improve their regulations, to get better conditions for science. Consider the fact that Portugal and the UK spend similar amounts on research in relation to their GDPs, but the proportionate scientific output of the UK is much higher because its ecosystem is research-friendly. We've already made recommendations to 15 countries on what we'd like them to do to improve their regulatory environment; we want no barriers for scientists.

The aim of the European Research Area (ERA) was also to create a barrier-free environment for science in the region. But although EU Member States have supposedly signed up to it, [little has happened](#). Why?

The ERA is seen as a Brussels-driven process, but it is Member States that will have to take the actual initiatives, and we can't force them. The whole process has been disappointingly slow, but the Commission has now set deadlines. It has asked each Member State to create a road map of how they plan to achieve the ERA targets before mid-2015. Germany has been the first to do so, and has set aside funds to carry it out. Theirs is a good model. We will name and shame the Member States that don't meet our deadline. In particular, I want to see Member States guarantee transparency in scientific and academic appointments, as well as a gender balance. And I'd like the member states to align their research agendas so we get a good level of synergy across Europe.

H2020 is different from previous programmes because it is organised around 'grand societal challenges', such as health, the ageing population and climate change. This structure requires deep interdisciplinarity. Some researchers have found that hard to engage with: is it working? Everyone realizes that the grand challenges can't be solved by one group. Take health: big data can help doctors in ways that they could never have imagined, but to make this real, collaborations are needed that bring together biomedical researchers with computing experts who can build the necessary digital platforms. And, critically, the mix will also need social scientists who can ensure doctors and patients are going to be comfortable with the 'digital health agenda'.

It is clear to us that social scientists, from anthropologists to cultural-heritage experts, will have a huge contribution to make in virtually all of the societal challenges, because the societal impacts are going to be far-reaching and public acceptance crucial. I believe such

interdisciplinary teams get better results – but I know they take time to get working. It requires scientists to change their mind-sets and mentality and social scientists to get out of their silos and join the challenges that society has identified as important. The results of our first call shows that we haven't so far quite managed to really embed social scientists into H2020.

What else has changed in the commission's research agenda?

The Commission has a new focus on research integrity. We are sensitive to the fact that we are dealing with taxpayers' money and have the responsibility to ensure that it is being spent appropriately. We want to develop new, independent guidelines on what research integrity means. The only instrument we currently have to deal with transgressions is within our financial fraud strategy, but that may not be enough.

What keeps you awake at night?

I like to joke that I sleep like a baby – I wake every hour and cry! But seriously, the responsibility for spending so much taxpayers' money properly does sometimes keep me from sleep. In five years' time, will people look back and see that I have been able to get more resources for research and innovation in Europe, made more impact in getting science closer to the market, improved the lives of scientists? That's what I want to be remembered for, but the challenges are huge.

Momentum for European Innovation and Competitiveness

Carlos Moedas, Commissioner for Research, Science and Innovation spoke at a European Investment Bank conference in Berlin:

Ladies and Gentlemen,

My message to you is simple, that in the future we will be judged for the investments we choose to make now. What? Where? When? and Why? Now, above all. Sufficient time has passed to understand the complex nature of public effort needed to advance new entrepreneurship and innovation. As policymakers, we can no longer afford to hide behind the words "progress" and "opportunity", because of our own vanity. Just to be seen to be investing in something, anything, anywhere, anytime. European citizens are at a point of zero tolerance for well-meaning, but ineffectual gestures. And rightly so. Now more than ever, we will be judged not for the quantity but for the quality and patience of our investments.

Since unification, successive German governments have led by example, making Research, Science and Innovation permanent features of public investment. The European Union has acted with equal foresight, substantially increasing its current budget for Research and Innovation, at a time when the overall budget was being reduced. There are no guarantees in life, but that decision is already etching its mark.

My first formal act as Commissioner, was to launch a swift process that channelled substantial funds into Ebola vaccine research. In record time, the European Commission was able to launch a major call. Able to mobilise over 200 million EUR and many hard working researchers. Just last week, we received news from Inserm. News of their promising, new treatment for early stage Ebola infection. We can be uplifted, proud, of this breakthrough, and everything we hope it will mean for humanity. But we can do more than even this.

Our economies are no longer in free-fall. Capital is no longer scarce in many places, and yet we, in Europe, remain lethargic, occupied by investments that deliver short-term gains, look safe and conventional. The irony is, that this misplaced caution has a strangle-hold on the clearest path to our common prosperity. Limiting the potential of our investments in European research, science and market-creating innovation.

Despite our creative diversity, we are the ones standing in our way. The alternative is prioritising investment in what has never failed us. In what has always been our greatest gift to the world. In the very essence of any great European enterprise or discovery. In the lifeblood of prosperity.

I ask that we invest more in knowledge and in people. That is our differentiator. As Europe we are the best at producing knowledge and our diversity is key for our future. And so today, I wish to touch on two points in particular. The first is what we're doing at European level to treat the ailment of anaemic R&D expenditure, and the second is the kind of cooperation with Member States, industry and private sector investors we hope will lead to the healthy and vigorous transfer of science to market.

And so to my first point: What are we doing? We're investing as never before. We're investing in a way that is flexible enough to respond to major crises like Ebola. We're investing in a way that allows for research and innovation to create markets and get us as someone once said from the Internet of Things to the Age of Intelligent of Things. We're investing in a way that will help bring research results to market faster. Whether it be through public private partnerships or

the European Research Council. And we're investing patient capital into long term projects, that require fundamental research, and will lead to the kind of science and innovation from which future methods, technologies and business models can grow. So how is all this investment taking shape?

As I mentioned earlier, Horizon 2020 saw a 40 % budget increase from our previous framework programme – making it the biggest multinational research programme in the world today. Open to the world. Funding excellence wherever it finds itself.

As presented by President Juncker, the new European Fund for Strategic Investment will further support research and innovation, by leveraging more public and private sector financing for "high risk high reward projects". From a rent seeking economy to a knowledge economy. Covering a much broader range than could ever have been achieved with Horizon 2020 alone. What's more, new synergies with Structural Funds will make Regions key partners for improving R&I capacity and competitiveness across the EU.

Finally, we have taken the first steps towards creating a Capital Market Union, which should provide innovative projects with more diversified venture financing in Europe. We are far too dependent on bank financing. In the US, around 80 % of financing comes from capital markets and 20 % from Bank Loans. The situation in Europe is basically the opposite and this has consequences. Banks shy away from high-risk, R&D-intensive investments. The investments we need for Europe's competitiveness.

So Horizon 2020, the new European Fund for Strategic Investments, better use of Regional Funds for Innovation, and the moves towards a Capital Markets Union are just four of the ways the European Commission is taking new steps to improve the quality of public expenditure on research, and stimulate more private investment.

Because we will never be able to tell what the future holds in terms of innovation. It wasn't that long ago that smart phones entered the global market place. Now many of us don't think twice about reading our emails at the touch of an app, at thirty thousand feet, on a flight that costs the same as a tank of petrol.

As politicians, there is also a lot we can do to eliminate the barriers to natural growth and innovation. If we want to see Europe's natural inquisitive and entrepreneurial spirit flourish, we cannot afford to stifle innovation with red tape. We must not kill creativity and invention with bureaucracy. Innovation needs "creative abrasion" for ideas to flourish into products. We

have 28 Member States and over five hundred million people, whose ideas could achieve something, if we let them. If we invest in making Europe a more attractive place for everyone to test out their ideas. If we make Europe a continent that invests in Open Science and Responsible Research and Innovation. I call it the three Os: Open Science, Open Innovation and Open Data. If we provide far better incentives.

There was a time when the billion dollar tech start-up was a pipedream: quasi-mythical entities that became known as unicorns. Now unicorns like Uber, Dropbox and Airbnb, and European ones like Spotify, Shazam or Rovio, are showing the whole world what disruptive innovation is all about. We need more examples like these. And we need them in all sectors. We need to provide the kind of incentives that encourage all European innovators to think global from their first day in business.

Good ideas, set free, can change the way we do just about anything.

Which brings me to my second point. This is where working together with Member States, industry and private investors becomes paramount. Member States must play their part in ensuring the Commission's new Investment Plan supports European research, science and innovation whenever and wherever possible. Just as industry and private sector investors must have the right information and incentives to take up these opportunities whenever and wherever possible.

When it comes to research, science and innovation - no matter how popular or unpopular the EU may be at home - Member States must put as much effort into building momentum at European level as they do at national level. It is in everyone's interest! To do so, is to invest in nations too.

In this day and age, no one country can solve climate change. No one country can end chronic disease or make their ageing populations young. Alone, no one country can even maintain a space station. 21st century science and technology show the value of working across disciplines and across borders.

It was at CERN, the European Organization for Nuclear Research, where physicists and engineers probe the fundamental structure of the universe, that Tim Berners-Lee, a British scientist, invented the World Wide Web in 1989. A European hub of cultural, intellectual and scientific exchange, resulted in an innovation that has fundamentally changed the way we work, communicate and learn.

The new European Fund for Strategic Investments, if used to fund research, science and innovation at every opportunity, could lead to breakthroughs the consequences of which we

can only imagine. Who remembers that it was by discovering the concept of anti-matter, that Medical Research developed the PET Scan decades later, able to detect cancer.

So my call to action is this. Let us invest in knowledge and people. Let us continue to explore every frontier, so that we may profit from even one lightening bolt of inspiration that will encompass the whole world.

Single Digital market

The European Commission has set six specific objectives in its strategy for a single European market, which it will present in the month of May. In a draft document, the European institution takes stock of the not particularly brilliant progress made in the digital economy, identifies major obstacles to the creation of a fully functional single digital market and lists the factors which will allow consumers and businesses to take full advantage of this digital market. The six objectives laid down by the Commission are as follows:

- 1) building confidence: the key to the success of online activities is to build confidence. Consumers and businesses need guarantees that their online data and activities are secure;
- 2) removing restrictions: access to online goods and services must be guaranteed, irrespective of the nationality of the consumer, their place of residence or location;
- 3) ensuring access and connectivity: promoting the integration of the market, competition and investments to give households access to broadband at reasonable prices;
- 4) building the digital economy: access providers and the industry in general must be supported, and not hindered, when they offer digital goods and services. Tax procedures in particular must be simplified;
- 5) promoting “e-society”: citizens and businesses need to be able to have access to online solutions in all areas of everyday life. Public administrations must provide online access to their information;
- 6) reinforcing digital innovation and research: investing in technological research and high-tech innovation to boost growth and jobs.

In order to achieve these objectives, the barriers to the creation of the single digital market must be removed.

In its document, the Commission identifies the major obstacles to this digital market:

- 1) lack of consumer confidence in the networks and lack of security of the online environment: 59 % of consumers are not worried about buying online from a supplier located in the country of residence. This confidence level falls to 35 % for suppliers in another Member State. The fragmentation of the legal rules (particularly as regards guarantees and penalties), the gaps in the rules in favour of consumers and the lack of protection from fraudulent online operations are behind this lack of trust;
- 2) lack of measures to fight cybercrime: 80 % of citizens are concerned by security when carrying out online operations, compared to 75 % in 2013 (Eurobarometer survey). The Member States must work together to fight cybercrime, as soon as possible;
- 3) too much regulatory fragmentation prevents businesses from offering their goods and services beyond national borders;
- 4) obsolete commercial models: designed to function “off-line”, the current commercial models need to be reviewed and replaced with new, more flexible ones, which are adapted to the online environment;
- 5) disparate legal frameworks for online intermediaries: the Member States all implemented the ‘e-commerce’ directive of 2000 differently, leading to uncertainty for online intermediaries, access providers and rights holders;
- 6) geographical restrictions preventing an online good or service from being provided across national borders: these restrictions are due to a number of factors (different VAT procedures, restrictions on the portability of content, diversity of consumer protection rules);
- 7) different and cumbersome taxation procedures: VAT rates which differ depending on whether the good or service is carried out in the country of origin, another EU country or in a third country;
- 8) disparities in the tax burden: companies operating online only, without a physical presence in a Member State, give rise to different tax treatment, which distorts the competition rules;
- 9) Fragmentation of the telecoms market: the framework needs to be more coherent, more stable, more transparent, more competitive and more harmonised;
- 10) online supply of goods and services is too expensive and interoperability is lacking between the various operators: open standards and improved interoperability of the systems is vital for the deployment of innovative services.

Lastly, the Commission highlights the change factors which will help to speed up the creation of a functioning single digital market:

- 1) providing better access to funding for digital companies: the differing national regulatory regimes are an obstacle to access to funding from one country to the next and this must be remedied;
- 2) improving the digital skills of entrepreneurs, employees and consumers: currently, more than 40 % of adults lack basic skills and more than 70 % of them need more training on digital matters. More than 900,000 extra jobs could be created if the number of qualified employees was high enough;
- 3) allowing businesses and citizens to interact effectively with public services within a clear and transparent framework;
- 4) establishing fair competition rules for online activities;
- 5) stimulating research and development in the digital sector: Europe lags behind in this area compared to investments made by the Americans and the Asians;
- 6) promoting the conditions required for digital and online education: not enough higher education establishments use new teaching models based on online technologies, yet these would make a real difference to improving the education systems in the European Union.

Public hearing on the digital Single Market

You are invited to take part in discussions on [Digital4EU](#), a website for collecting and sharing the views and experiences of everyone interested in a digital single market, but also for conversations and dialogue.

Europe needs a [connected Digital Single Market](#). In May 2015, the European Commission will propose a new strategy to make this a reality.

While preparing the strategy, DG Connect would be happy to hear about what you need; what your experiences are; what problems you have encountered, and what your ideas are. The first discussion within the European Commission is foreseen on 25. March.

On Digital4EU, you can post your [ideas and experience](#); upload studies or surveys to support your views under [Evidence](#); post short [videos](#); submit a [blog post](#); create a [poll](#) or answer existing polls; and share this site with friends and colleagues.

EIT budget cut is 'not money lost for innovation', says Education Commissioner

Speaking at the Science|Business Horizon 2020 conference, Tibor Navracsics, the European education commissioner, defends controversial plans to tap the EU innovation budget, and spoke on the importance of Marie Curie grants for researchers

Tibor Navracsics attempted to blunt criticism of a plan to take 2.7 billion EUR from the European Commission's research and innovation budget and put it into an investment fund for economic recovery.

He assured academic and business leaders at the Science|Business Horizon 2020 conference that money to be taken from the research kitty, including a large slice from the European Institute for Innovation and Technology (EIT), will help generate additional investments of at least 315 billion EUR. Dubbed the Juncker plan after President of the European Commission Jean-Claude Juncker, it has been highly controversial amongst researchers, who have come out in droves with a plea that lawmakers refrain from dipping into Horizon 2020, the EU's research and innovation programme.

"This is not money lost for innovation," said Navracsics, who is Commissioner for Education, Culture, Youth and Sport. "On the contrary, [the fund] will provide finance for relatively high-risk proposals which would otherwise find it difficult to raise funds."

Many university and industry officials, who were counting on receiving some of the funding, have protested news that a large share of the EU Horizon 2020 cuts—350 million EUR—would be directed at the Budapest-based EIT. With a headquarters staff of about 50, it co-funds large collaborative networks between universities and industry for innovation. The networks - in such fields as sustainable energy and ICT technologies - work together to develop new products and services, and train new engineers and entrepreneurs. The cut would amount to 13 % of its budget.

While cuts were "painful", they should be considered against a sevenfold increase in budget for the institute compared to the 2007 - 2013 budgetary period, Navracsics reminded the audience.

"Let's think of it as an opportunity," he said. "There's been no economic growth since 2008 so it's time for us to make a contribution."

"Nobody's happy with cuts but we have to make a bigger effort to revive economic growth."

Wanted: more researchers in industry

Another piece of Navracsics' large portfolio is supervision over Marie Skłodowska-Curie Actions: grants totaling 6 billion EUR to promote the two-way shuffling of researchers between academia and business. The Commission estimates that 65,000 researchers will receive funding from the programme in the current 2014-2020 cycle.

“Mobility raises quality,” was the Commissioner’s message, citing a 2014 OECD study which concluded that, on average, the research impact of scientists who change affiliations across national boundaries is nearly 20 % higher.

“Europe has relatively few researchers employed in industry,” he said. They make up only 45 % of total researchers compared to 78 % in the US, 74 % in Japan and 62 % in China. Marie Curie grants, which he referred to as “jewels in the crown of Horizon 2020”, not only brighten up a CV but help re-balance this picture, said the Commissioner.

Some former grant winners have gone on to move mountains said the Commissioner, before roll-calling Marie Curie fellows such as Stefan Hell, one of the 2014 Nobel Laureates for Chemistry, and the 2014 Nobel Prize winners in medicine, May-Britt Moser and Edvard Moser.

EU science programme opens doors to Ukraine

Ukrainian researchers and companies to be admitted to Horizon 2020 after deal last week. Ukraine signed up to join the EU’s Horizon 2020 research programme at a ceremony in Kiev.

The agreement, which the Ukrainian parliament must yet ratify, will see the country renew its membership of the EU research community. Almost 300 Ukrainians took part in the previous R&D programme, FP7, making the country one of the most successful examples of the EU’s efforts to boost international research cooperation.

The circumstances are very different now and the new agreement is seen a much-needed boost for a war-torn country whose economy is in decline. Ukraine’s Minister of Education and Science, Serhiy Kvit, a former president of the National University of Kyiv-Mohyla Academy, has been hands-on in moving science-related institutions, including 11 universities, away from separatist-controlled regions in eastern Ukraine, [according to Science Insider](#).

Once Ukraine pays its Horizon 2020 entrance fee, scientists, research institutions and companies can compete for funding on equal terms with EU Member States. Universities may also host European Research Council (ERC) grant winners.

Ukraine has also requested access to the Euratom programme, which facilitates investments in nuclear technology, but negotiations remain to be concluded.

Bieńkowska launches high-level defence research group

Elżbieta Bienkowska, Commissioner for Internal Market, Industry, Entrepreneurship and SMEs, launched a new high-level group to advise the EU on how it can support research on a future defence union.

[The group](#) consists of 16 people, including EU foreign affairs chief Federica Mogherini, former Swedish foreign minister Carl Bildt, a former defence minister of Poland, CEOs of companies in the defence sectors, parliamentarians and presidents of think tanks.

Elisabeth Guigou, President of the Foreign Affairs Commission of the French National Assembly, said that the group of which she is a member was set up following the conclusions of the [December 2013 European Council](#), with the purpose of preparing proposals for the next long-term EU budget (2020-2027).

According to Guigou, who is a former European affairs minister, European defence industries have become “much more autonomous”. She said that the group would prepare concrete proposals in the field of research, which would benefit both the civil and defence industry. Another element would be to make proposals with regard to pooling and sharing of defence capacities.

The high-level group will submit its report by March 2016, Guigou said. She added that it was important to use EU budget opportunities in the context of shrinking national budgets for defence research, and thus avoid Europe losing the global technological competition battle.

Future projects could include technologies in the field of intelligence gathering and surveillance, such as maritime surveillance, as well as the aircraft and drones.

A Commission communiqué mentions that in the field of defence, Commission President Jean-Claude Juncker will also draw from the expertise of his Special Adviser on European Defence and Security Policy Michel Barnier, France's former Internal Market and Services Commissioner. Juncker recently said that the EU needed its own army to face up to Russia and other threats, as well as to restore the bloc's standing around the world.

However, most Central European countries, and the UK, insist that NATO should remain the guarantor of security on the European continent.

EARMA event on Horizon 2020

EARMA held an event on Horizon 2020 in Brussels, where Alan Cross from DG RTD gave some insights on the first year of H2020 and changes to come:

Success rates are low and not likely to improve. This is a question of supply and demand. Phase 1 success rates are not included in the statistics. Oversubscription is 1:7 in H2020 compared to 1:5,5 in FP7.

Impact will either have the same weight as Excellence and Implementation or might be multiplied by 1,5 in Innovation Actions in future.

5+3 months are changed, so information about results goes out within 5 months, but does not trigger negotiations.

Most applications are sent the last day, the last hour, the last minute, putting the IT-system under major pressure.

International cooperation has declined with 40 % mainly due to the fact, that BRIC-countries' participation no longer are financed.

EU PRIZE FOR WOMEN INNOVATORS

The EU Prize for Women Innovators recognizes and celebrates women who have benefitted from EU funding related to Research and Innovation and who have combined their scientific excellence with an aptitude for business in setting up innovative enterprises and brought innovations to the market. After the successful forerunners in 2011 and 2014, the European Commission intends to award up to three Prizes for Women Innovators following a contest.

First prize: 100,000 EUR

Second prize: 50,000 EUR

Third prize: 30,000 EUR

Date of opening of the contest: 10 March 2015, at 17:00

Deadline to submit applications: 20 October 2015, at 17:00

For further information on the prize contest, please visit www.ec.europa.eu/women-innovators

Collaborative Sharing of Spectrum Inducement Prize

The Horizon Prize for collaborative spectrum sharing is a 500.000 EUR challenge prize. It will be awarded to an innovative and disruptive approach which will enable a significant increase in spectrum sharing and re-use, beyond the currently applicable spectrum sharing methods and centralised techniques. The winning solution should be a significant step forward from current technologies and solutions in terms of shared spectrum usage metrics and will have to prove its economic viability. The feasibility of the approach will have to be demonstrated through clear experimental results.

The objectives are:

- 1) To tackle the expected capacity crunch of wireless networks faced with booming traffic and usages;
- 2) To provide innovative yet implementable solutions enabling a significant efficiency improvement in the usage of scarce spectrum resources;
- 3) To reward excellence in demonstrating one or several innovative methods focusing on the provision of empowerment of local user communities with decentralised spectrum management capabilities;
- 4) To address the lack of demonstrated system capabilities of disruptive spectrum access and sharing methods, which go beyond the traditional cellular evolution and database, based sharing methods;
- 5) To foster experimental R&D and early proof-of-concept development to encourage innovation, business, and regulation in the domain of collaborative sharing of spectrum.

This prize will lead to a significant amount of research and potentially demonstrated capabilities of disruptive spectrum access and sharing methods, which go beyond the traditional cellular evolution and centralised sharing approaches.

It will contribute to the development of low cost, energy efficient systems solutions that will increase the efficient use of spectrum resources for enabling new services and driving the development of wireless systems.

It will also help overcoming the heterogeneous nature of spectrum access implementation in Europe. It will demonstrate societal and economic benefits for Europe with a clear innovation potential, business opportunities, and where applicable, required modernisation of European regulation in the domain of collaborative sharing of spectrum.

The submission system will be **available on 28 May 2015**

[Breaking the optical transmission barriers Inducement Prize](#)

The Horizon Prize for **breaking the optical transmission barriers** is a 500.000 EUR challenge prize. It will be awarded to a solution that maximises the fibre capacity per channel, spectrum range and/or spectral efficiency and reach. It should also be energy efficient, economically viable, and easy to install and deploy. The solution should have a strong potential to be adopted in future generations of optical-system products. The feasibility of the approach will have to be demonstrated through clear experimental results.

The objectives are:

- To overcome the current limitations of long-distance, optical transmission systems;
- To meet the bandwidth demand explosion;

- To provide the resources for future applications;
- To address the aspects of energy efficiency and economic viability of such optical breakthrough systems;
- To stimulate creative thinking across established SMEs, industrial and academic research organisations, but also to seed new industry to address the key component and system related questions, resulting in breakthrough solutions that can drive the European industry forward.

This prize will lead to a significant amount of research and potentially significant breakthroughs in the field of optical transmission which will ultimately find their way into the future optical networks.

It will help foster European leadership in optical transmission, by further capitalizing on the awarded results, and to the international visibility of Europe's excellence in this area.

The research produced will assist in supporting networks that deliver the insatiable demand for bandwidth, and in providing the resources for future applications that haven't been conceived of yet.

Please read carefully all provisions below before the preparation of your application: [Rules of Contest](#).

[Prize application template \(not available yet\)](#). General rules for prizes are described in [part F of the General Annexes](#) of the General Work Programme.

The submission system will be available on **28th of May 2015**

21st EARMA Annual Conference 2015

28 June - 1 July 2015, Leiden, The Netherlands

This year the theme for the conference is Global Outreach: Enabling Cultures and Diversity in Research Management and Administration. This theme reflects the growing need and ambition to reach out and get connected and work together globally. Cooperating not only in the field of scientific research & innovation and higher education but also in the field of research management and administration.

We are delighted to welcome you to EARMA 2015, which is being hosted by Leiden University, Leiden, the Netherlands. Leiden has been a leading centre for education and research since 1575 and is celebrating its 440th birthday this year.

Early Bird Registration open until 30 April!

Links

- [Early Bird registration - until 30 April](#)
- [Conference website](#)

Project Management and Administration in Marie Skłodowska-Curie Actions

21 April 2015, Helsinki, Finland

The training provides a basic understanding of project management and administration issues in H2020 MSCAs.

The focus of the day will specifically be on Innovative Training Networks (ITN), Individual Fellowships (IF) and Research and Innovation Staff Exchange (RISE). The training can be followed via [webcast](#).

Please note the start is 9.30 Finnish time, so 8.30 CET if you are following the webcast.

Kindly register [here](#) for the event and webcast by 13 April.

Links

- [Information, programme and webcast](#)

Key Enabling Technologies for Regional Growth: synergies between Horizon 2020 and ESIF

6 May 2015, Committee of the Regions, Brussels

The workshop aims to encourage active dialogue and exchange of ideas between the Key Enabling Technologies (KETs) -H2020 stakeholders and the national/regional authorities that apply for structural funds, and:

- 1) Raise awareness on KETs (advanced materials, nanotechnology, micro- and nano-electronics, industrial biotechnology, photonics, and advanced manufacturing systems) as drivers for industrial competitiveness in regions.
- 2) Stimulate interaction to enhance synergies, by engaging participants in discussions during the parallel sessions.
- 3) Showcase examples of regions that have identified KETs as priorities and promote interregional cooperation.
- 4) Explore how the new instruments help deal with current problems and limitations;

5) Identify the main barriers for addressing synergies from part of H2020 stakeholders and national and regional authorities.

Links

- [Registration Website](#)

Cooperation in Marine Science around the Baltic Sea and beyond

22 April 2015, Brussels

The Estonian Liaison Office (ELO) for EU Research and Innovation, representing the Estonian Research Council in Brussels, has the pleasure to invite you to the seminar 'Cooperation in Marine Science around the Baltic Sea and beyond: a contribution to Europe's Societal Challenges', which will take place on April 22nd from 9:00 to 14:00 at Square de Meeûs 1, 1000 Brussels (1st floor, room Luxembourg).

Regional research cooperation programmes can serve as effective policy coordination tools and foster excellent and society-oriented research results, as we intend to demonstrate by the example of marine research cooperation in the Baltic Sea and other regions of Europe. Welcoming remarks by Mr. Tunne Kelam MEP (EPP) will be followed by presentations on European (Horizon 2020) and regional (BONUS) marine research activities, and on the competences of two renowned Estonian marine research institutes - the Estonian Marine Institute of University of Tartu, and the Marine Systems Institute of Tallinn University of Technology.

The seminar continues with a panel discussion looking into how research initiatives BONUS, PRIMA and JPI Oceans can cooperate and contribute to the Horizon 2020 research priorities in the areas of Blue Economy and Resource Efficiency.

You are welcome to disseminate this invitation among your networks.

Links

- [Agenda and registration](#)

Publication of #ESOF2016 call for Scientific Session Proposals

2 March - 1 June 2015

Over the six days of 22-27 July 2016, Manchester will host the Euroscience Open Forum 2016 "Science as Revolution". ESOF is the biggest pan-European science platform where researchers,

journalists, policy makers, students and organisations can meet and debate European research and global challenges.

The call for scientific session for ESOF2016 can be found [here](#). The call is now open and the deadline for session proposals submission is 1 June 2015 at 10:00 am CET

Links

- [ESOF 2016 website](#)

Comments or questions should be directed to [Rikke Edsjö](#)