

# **WIRE** 2022 **LA SEMAINE DES RÉGIONS INNOVANTES EN EUROPE**

**Université Paris-Saclay**

**11, 12 & 13 May 2022**

**Week of Innovative Regions in Europe**

**WIRE 2022 – Towards a leading Europe in  
breakthrough innovation:  
unleashing the potential of regions**

**Conference conclusions**

## Conference conclusions

Week of Innovative Regions in Europe (WIRE) is the main European policy forum for innovation and regional development. The conference provides a platform for policymakers, public authorities, knowledge centres and enterprises to discuss research and innovation practices, challenges and opportunities throughout the European regions, with a direct view on the current and future European Union funding programs.

This year's conference, the twelfth edition, is hosted by Université Paris-Saclay, France, under the French Presidency of the Council of the European Union. The theme is 'Towards a leading Europe in breakthrough innovation: unleashing the potential of regions.'

Recent events demonstrate the importance of continued European support of breakthrough innovation. While the Covid pandemic and the war in Ukraine brought solidarity, they also exposed Europe's dependencies and resulted in other disruptions (for example, Russian fossil fuels, food scarcity, and foreign supply-chain), which further exemplifies the need to be agile and act fast. Additionally, the continued competition, particularly with the United States and China, illustrates the need to strengthen technological, health, and industrial sovereignty of Europe. Furthermore, the ambitious commitments of the European Green Deal (2050) and Horizon Europe (2030) will require significant change and an enormous number of breakthrough innovations to all sectors of the economy and society to achieve success. Innovation is at the core of Europe's resilience and preparedness for the present and the future.

Over the two days of panels, workshops, and presentations, strengths, challenges and opportunities were discussed. Below are common themes from many of the sessions.

## European strengths to celebrate and promote

- **Existence of tools and programs** to support innovation; often cited was the European Innovation Council (EIC).
- **High quality of life** in Europe and its regions is unparalleled.
- **Powerhouse of knowledge** in the world (think high quality universities and research).
- **Strong ties to scientific discoveries**, but needs to bridge the gap between innovation and industrialisation.
- **Improved European ecosystem for start-ups**; additionally, unicorn companies have doubled in the last year.
- **Small and medium-size enterprises** (SMEs), Europe's backbone to the economy, have the potential to be at the forefront of breakthrough innovations if we give them the enabling conditions.
- **Different regions** in Europe have the potential to become strong in different technologies.

## Challenges and areas for improvement

**Ecosystems:** Development and improvement of ecosystems are key to coming up with solutions to the global challenges; this also will help regions that are in transition. Investment with different partners, including SMEs, start-ups, academia, and researchers are crucial. It is important to build networks which go beyond country boundaries.

**Regions:** Overall agreement that the support and organisation of regions is essential. Regional ecosystems need innovative research; universities and national research organisations play a key role. The linking of regions, countries, markets to each other remains very fragmented. Local governments need not only money, but also advisory services.

**Territory and innovation gaps:** Related to regions, despite progress in bridging the innovation divide, the innovation performance gap among European Union regions remains high. Territorial gap is a concern: breakthrough innovations often happen in metropolitan capitals, rather than on the periphery. The digital territorial gap was accentuated during the Covid pandemic. Talent also is unequally distributed across Member States and regions, including many higher education institutions.

**Talent recruitment and retainment:** Europe is losing the global race on talent; more attention needs to be given to this 'brain drain.' Salary plays a large role in attracting and retaining talent, promoting the quality of life in Europe has the potential to as well. Women and people from diverse backgrounds are underrepresented.

**Culture of risk taking:** The risk-taking mindset is lacking in Europe. Sharing risk and failing are part of the innovation process, this attitude needs to be developed and encouraged. Recognition and acceptance that failure is a natural part of risk-taking. The funding structure contributes to the lack of incentive to take risk.

**Regulation:** Striking the right balance of regulation and complexity is important. National borders' administrative and regulatory barriers do not allow for the efficient and agile innovations. Regulatory policies and tax incentives could be considered in order to encourage more funding towards scale-ups from institutional and private sector players.

**Funding:** Funding and investment are key when it comes to breakthrough innovations. Late-stage funding is critical, otherwise foreign funding may be sought. The scale-up gap between the European Union and Asia and the United States remains large ('Scale-up Europe' has potential). Europe lags behind, relative to the United States, in capital markets, and research and development. There is difficulty to access funding for new organizations and actors; funding goes to the same systems and organisations. Simpler policies to access funding could help. To contrast, there was the argument that funding is not an issue in Europe, but rather the coordination between different actors, and development of a strategic approach from the research to the market at European, regional and local levels could be improved.

Economic prosperity of Europe is important for its autonomy and the lives and livelihoods of its citizens. Member States need to work together because the current and future challenges require resources that a single state cannot provide. Breakthrough innovation tries to find solutions to problems in a different way. With the global challenges that are ahead, breakthrough innovations are key to Europe's success.

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Master of Ceremony: **Jennifer Baker**, Freelance tech and EU policy journalist

# Opening Plenary

Wednesday, 11st May, 2022; 10:30-11:30 am

## Welcome from Paris-Saclay

**Sylvie Retailleau**, President of Université Paris-Saclay

Sylvie Retailleau warmly welcomed attendees on behalf of the University Paris-Saclay. 'Towards a Leading Europe in Breakthrough Innovation: Unleashing the Potential of Regions' is the theme of this 12th edition of WIRE. This brings together major regional, national, and European actors of innovation and research to University Paris-Saclay. We have the immense privilege of having high-quality speakers from across Europe with opinions, experience, and knowledge from a diversity of European, national and local situations, and this is what is going to make this event so special. It is a true pleasure for the University Paris-Saclay and its actors and its partners to take part in this kind of conference.

*Key messages from her opening statement:*

- ✓ The University Paris-Saclay promotes research, innovation, and training; the continuum of which cannot be separated, as it is the heart of an innovation.
- ✓ Regional ecosystems need innovative research; universities and national research organisations play a key role.
- ✓ Innovation needs to be transferred to business via start-ups, incubators, and accelerators.
- ✓ We also need to teach our students how to be entrepreneurs and help researchers facilitate the mobility between the private and the public sector.

## Welcome from the French Presidency of the European Council

WIRE 2022 is part of a broad programme of events and priorities that France has set for the French Presidency of the Council of the European Union for Europe and its regions. This session will welcome the participants to the WIRE 2022 conference and outline its strategic importance, the conference's key objectives, and the need to foster breakthrough innovations.

***Benjamin Delozier**, Head of the Competitiveness, Innovation and Business Development Department at the Directorate General for Enterprise*

Benjamin Delozier stated that he was delighted to speak on behalf of the French Presidency of the European Union at the beginning of this conference. Breakthrough innovation makes us think about complex problems with a range of different stakeholders and disciplines. It is very unpredictable, it is a long-term approach, and it requires high-levels of investment, with a high-rate of failure; so there needs to be public involvement. Disruptive innovation is key companies. The capacity of business to develop and market products with high-tech aspects is a key factor for differentiation and competitiveness in the face of international competition. For this reason, the French Government has made supporting disruption innovation a priority.

*Key messages from his speech included the importance of:*

- ✓ Giving researchers opportunities to promote the results of their research.
- ✓ Supporting research and development as well as the need of public support of going to market.
- ✓ Supporting and stimulating innovative companies.
- ✓ Supporting the growth and development of European ecosystems.
- ✓ Developing support continuum for the funding of scale-ups and providing late-stage funding.
- ✓ Strengthening the attractiveness of Europe for talent.
- ✓ Strengthening the technological, health, and industrial sovereignty of Europe; disruptive innovation plays a role.

**Claire Giry**, *Head of Research and Innovation at the French Ministry for Higher Education, Research and Innovation*

Claire Giry said that it is a real joy for her to be able to open this conference on behalf of the European Commission and the French Government. The program of this conference is particularly rich. These three days are an opportunity to hear from a number of specialists, researchers, public policymakers, and funders. They will be offering complementary perspectives, but European perspectives always, and the ways to make Europe an innovative leader. We want to work on the economic prosperity of Europe and for its autonomy. We want to make Europe a place of innovation.

*Points emphasised in her speech:*

- ✓ We want to work on the economic prosperity of Europe for its autonomy.
- ✓ We want to make Europe a place of innovation and science.
- ✓ In order to create the supportive environment, we need global-level research, circulation of information, risk taking, and resources (not limited to finance, but including skill).
- ✓ We need to work together within European states because the challenges that we are facing require resources that a single state cannot provide.

## **Welcome from the EU Commission 'Breakthrough innovation and Europe'**

A new wave of breakthrough innovation is ahead of us and will have vast consequences on Europe's prosperity and ability to meet its objectives. Europe possesses many assets to ride this new wave, but also certain shortcomings which may hinder its ability to succeed in the global race. Europe must mobilise all of its capacities and ensure that all regions contribute to and benefit from this new wave of innovation. To do so, Europe must update and complement its innovation policy toolkit.

**Joanna Drake**, *Deputy Director General, DG Research and Innovation, European Commission*

Joanna Drake congratulated the French Government and University Paris-Saclay for organizing this very timely conference on breakthrough innovation and the role of the regions as part of the event program of the French Presidency of the European Council. We all know that research and innovation are key drivers for digital and green transitions that Europe has undertaken and needs to even



accelerate in order to face the challenges that we are already living now but more intensely in the future. They are critical drivers in our own competitiveness – i.e., economic competitiveness and economic growth of Europe. They are at the core of our resilience and preparedness for the present and the future.

*Highlights from her speech included:*

- ✓ Positive characteristics of Europe include: Europe still hosts the powerhouse of knowledge in the world, Europe is doing relatively well in start-ups, ‘unicorn companies’ have doubled in the last year.
- ✓ Shortcomings exist: Europe underinvests (relative to trade partners), technology scaling-up is very lacking, European ecosystems of linking regions to each other remains fragmented, there is an innovative divide within regions and national ecosystems; and Europe is losing the global race on talent.
- ✓ European programs exist and can help with these shortcomings. These include: Horizons Europe, Payments Recovery and Resilience plans, Cohesion Program, Horizon Policy Support Facility and Technical Support Instrument, European Innovation Council, and ESCALAR (European Scale-up Action for Risk capital, which will be expanded ‘InvestEU Fund’ financial instruments of European Union.

# Session 1.1. Europe and its regions at the crossroads. Seizing the opportunities of a new wave of breakthrough innovations – A policy perspective

Wednesday, 11st May, 2022; 11:30 am-12:30 pm

Moderator: **Mathieu Rouault**, Journalist at Grand Labo

Panellists:

- **Josianne Cutajar**, Lawyer, Politician and Member of the European Parliament for Malta
- **Joanna Drake**, Deputy Director General, DG Research and Innovation, European Commission
- **Adéla Hradilová**, Board Member, Moravian-Silesian Innovation centre Ostrava
- **Markku Markkula**, Vice-President of the European committee of the Regions (CoR)

## Session brief

Europe's prosperity, global competitiveness and social model will require seizing the opportunities that a new wave of breakthrough innovation will bring about. In addition, Europe needs to ensure that new innovations are steered towards achieving Europe's objectives, notably Europe's green deal, and that they are aligned with its core principles of boosting cohesion and inclusiveness. To achieve this, Europe needs to create the right policy framework; this will require building synergies and strengthening coordination between different levels of governance (European Union, national and regional).

## Session summary

The session opened with Joanna Drake commenting that there is not a formally recognised definition of breakthrough innovation, but that there is a common understanding that it is something that is disruptive, and is a game changer and paradigm shift that creates opportunities. Breakthrough innovation tries to find a solution to a problem in a different way. With the global challenges that are ahead, there is a potential for a plethora of breakthrough innovations. But to solve these challenges, we need to think of how we are going to disrupt the current models,

which are not well positioned to address these future challenges. The Covid pandemic is an example that we need to be agile and act fast. We look at the market's and society's needs, act, readapt, and develop solutions to address these needs in a timely and agile manner.

Breakthrough innovation is a concern at the local level. Many regions are in transition and face challenges; development of innovation ecosystems will help with their transition.

Markku Markkula stressed that innovation comes through the interaction between people. It is no longer only from the traditional university lab approach, but rather innovation comes from the interaction of people of diverse backgrounds and disciplines. The European Union has many programs that have thought about ecosystems and place-based ecosystems and our need for them. Operating only through the virtual reality is not enough, which we realized from the Covid pandemic.

There was discussion how citizens need to be open and receptive to innovations. The European Union has to promote innovations in a positive manner; for example, communicating how innovations could address societal goals and provide better benefits to our citizens, rather than presenting innovations as negative disruptions. Politicians, policymakers, researchers, institutions and entrepreneurs play a role in this. It is also important to have the encouragement from the community level (e.g., regional authorities, local government, and local policy stakeholders). We need to give practical examples to our citizens of the everyday benefits.

Josianne Cutajar remarked that small and medium-size enterprises (SMEs), Europe's backbone to the economy, could be at the forefront of breakthrough innovations if we give them the enabling conditions, particularly with regards to achieving the ambitious goals that the European Union is putting forward in both the environment and digital themes.

Discussion included how the European Union is trying to encourage, through its budget, policymaking and politics, a combination of a top-down and bottom-up approach to innovation. Joanna Drake provided examples of the top-down approach: European Union declaration to be the first climate-neutral continent by 2050, and Horizon Europe's five mission areas. The European Innovation Council is an example of the bottom-up approach: we need to fund innovators today, for solutions to unknown, future problems. She agreed with the other panellists that it needs to be inclusive, and we cannot leave people out.

The session briefly discussed the risk-taking mindset. Adéla Hradilová noted the level of entrepreneurship culture varies greatly across Europe and across regions. Her culture traditionally was risk-adverse and afraid of making mistakes.

The panel discussion moved on to territorial gap. Josianne Cutajar highlighted there is a tendency that the breakthrough and disruptive innovations happen generally in metropolitan capitals, rather than periphery, and therefore it is essential to address the innovative gap when it comes to territoriality. The digital territorial gap was accentuated during the Covid pandemic. But other territorial gaps exist as well; when it comes to breakthrough innovations, there is the risk that the existing territorial gaps will widen further. She referred to the 'Eight Report on Economic, Social and Territorial Cohesion', which not only addresses gaps between different Member States, but also at the regional level. She emphasised that this gap needs to be tackled because it affects citizens. She also referenced the European Innovation Council Work Programme, which gives attention and provides measures to address geographical balances, and the Enterprise Europe Network. The European Union needs to work to leave no one behind. There is a ripple effect: innovations lead to other innovations.

The moderator asked panellists about ways to facilitate innovation at the regional level. Discussion included the difficulty to access funding for new organizations, and how local politicians' turnover often results in instability of local organisations. There was reference to the Enterprise Europe Network, which provides partial funds to innovation agencies at the local level.

With regards to competition, it was noted that it is not negative, but positive, 'because everyone strives to reach their full potential.' Competition from the United States and China is not all 'doom and gloom' for Europe. Europe is at the forefront of research (there is a high-level of quality and quantity of researchers and publications, high-level of university); however, excelling at research does not necessarily translate to excelling at innovation. We need to work more on going from research to practical innovation (the Horizon and Cohesion funds help).

Conversation continued, noting that the financing system in the European Union is overly complicated: too much time is spent on creating a high-quality application to secure funding, when more time should be spent on the real activity. A few of the panellists commented on the benefits of the 'seal of excellence' by the European Commission and how this seal could help proposals secure funding from other sources. Also noted was the need for stronger capital markets; Europe lags behind when compared to the United States.

## Key messages/bullet points of the session

- ✓ To solve the global challenges that lie ahead, we need to think of how we are going to disrupt the current models, which are not well positioned to address these future challenges.

- ✓ Many regions are in transition and face challenges; development of innovation ecosystems will help with their transition.
- ✓ The European Union has to promote innovations in a positive manner: communicating how innovations could address societal goals and provide better benefits to our citizens.
- ✓ SMEs could be at the forefront of breakthrough innovations if they are given the enabling conditions.
- ✓ The European Union is trying to encourage, through its budget, policy and politics, a combination of a top-down and bottom-up approach to innovation.
- ✓ It is essential to address the innovative gap when it comes to territoriality.
- ✓ With regards to competition with the United States and China, it is not all 'doom and gloom' for Europe: Europe is at the forefront of research. However, excelling at research does not necessarily result in excelling at innovation. There needs to be more work on going from research to practical innovation.
- ✓ The financing system in the European Union is too complicated: too much time is spent on creating a high-quality application to secure funding, when more time should be spent on the focus of the real activity.

## Relevant quotes

*'I know first-hand how important it is to have innovative breakthroughs for all of our regions and to really leave no one behind.'* (Josianne Cutajar)

*'We need to encourage innovation for its sake.'* (Joanna Drake)

*'In our culture we are really afraid of making mistakes, that's the result of our education system, it has been changing now, but it will take time.'* (Adéla Hradilová)

*'Innovation, it is not just anymore the tradition that university has a good laboratory and innovation comes from there, it is the meeting people of different backgrounds, different disciplines, young and old, and so on. And that's, I think, the key of this issue.'* (Markku Markkula)

# Session 1.2. Europe and its regions at the crossroads. Seizing the opportunities of a new wave of breakthrough innovation – An innovator perspective

Wednesday, 11st May, 2022; 2:30-3:30 pm

Moderator: **Mathieu Rouault**, Journalist at Grand Labo

Panellists:

- **Birgit Aru**, Consultant on sustainability and climate policy frameworks at Single Earth
- **Gerhard Huemer**, Director for Economic Policy, SMEUnited – Crafts and SMEs
- **Narcis Héraclide**, Head of innovation at the Paul Guinot Association and doctoral researcher at the University of Poitiers
- **Bachir Kerroumi**, PhD researcher in 'Urban resilience and social inclusion' at Gustave Eiffel University, President of Paul Guinot association for professional training adapted for visually impaired people

## Session brief

Many new breakthrough innovations will go beyond the digitalization revolution. A new form of 'superstar companies' have emerged. Companies like Google, Apple, META (previously known as Facebook), Amazon, Alibaba have profoundly revolutionised existing markets and become global behemoths in just a few years, reaching a market capitalisation similar to or above the annual GDP of an average-sized European country. These companies are investing heavily in R&I in search of the 'next big innovation'. In this context, how are Europeans preparing themselves? What are the key roadblocks that they may face? How can regional, national and European policies help to remove or mitigate these barriers?

## Session summary

This afternoon's session started with panellists discussing the work of their companies and organizations. Birgit Aru, of Single Earth, stated that its goal is to build a tool that will enable a system-wide change and a paradigm shift. She

emphasised that investors were attracted to Single Earth because it has the potential to create significant change, not incremental.

Gerhard Huemer of SMEUnited represents small and medium-size enterprises (SMEs) and their needs to European stakeholders. In the area of innovation, the association uses different programs including Horizon Europe and innovative finance. It is looking to put pressure on the economy and on businesses to become more innovative. Additionally, the association is looking at barriers to innovative projects, for example, language, regulation, access to finance, access to knowledge, skills, and staff. SMEs are the main driver of innovation in the business world. With regards to innovation systems, Europe can provide support but it needs to be at the different national and regional levels, because there is not a 'one-size-fits-all' solution.

Narcis Héraclide of Paul Guinot Association, a non-profit that is advocating for full inclusion of the visual impaired, said that the organisation is working to have a more innovated section in its activities because it wants to change the way disability is framed in society. Trying to change the mindset of people is a source of innovation.

Bachir Kerroumi, PhD researcher in Urban resilience and social inclusion, and of Paul Guinot Association, pointed out that advanced countries where people with disabilities have found their place, are countries that have placed innovations on all levels.

The subject of funding was discussed. Birgit Aru commented that finding funding is always complex; but noted that their investors were attracted to novel solutions that bring environmental impact. When asked if money is the first thing one needs to address when developing a project, she noted that money is definitely an enabler; but first you need a very good idea and a very good solution, whether it's a technical innovation or a societal innovation, to a problem.

The moderator asked if Europe needs to create new 'Silicon Valleys' in Europe. Gerhard Huemer said that if this is a policy approach, it will lead nowhere. One needs to ensure that you have the right innovative environment and systems; and from there, breakthrough innovation may or may not happen. He continued to note that projects coming from countries and regions that have innovation systems in place (e.g., innovation incubators, advisory services, support for classes) have a much higher success rate than projects coming from regions where this does not function.

Per Narcis Héraclide, breakthrough innovation is more like a paradigm shift. If you create something with the existing cultural framework, then you just are reproducing something rather than changing the core of anything. When you start to think of people with disabilities as full citizens of the society, and start to think with them of how to solve an issue, then you are creating collective intelligence.

This then can result in new solutions that are emerging (i.e., breakthrough innovations).

The discussion moved on to regulation. Regulation and policy can be an enabler, but it can also be a deterrent; it has to be done in a smart way by regulators. Bachir Kerroumi stated that regulation is a fundamental question. He noted that there are laws in France, European directives, budgets and programs, but there is no policy or political program, nor citizen ambition with a developed strategy. There is no political perspective or ambition to put in place a coherent cross-cutting approach – but that it is needed, like what was done with ecology.

Risk-taking mindset was discussed, specifically if it is lacking in Europe. If you compare Europe to the United States, for example, the answer is clearly yes. Historical reasons may explain why this has developed, but the effect is that average people in Europe are more expectant of solutions and protection from the state. This behaviour is in the financial sector as well. Businesses and SMEs in the European Union are more financed by loans, which by nature are less able to take risk than if they were funded by equity finance. Furthermore, this is also evident in research centres and universities within Europe; there are less spin-offs and start-ups from those that are fully, publicly financed, than those that are cooperating with the private and business sectors. This structure of funding leads to a lack of incentive to take risk. Birgit Aru agreed and said that equity financiers are more encouraging of risk-taking by her firm.

Closing recommendations included the need for radical solutions and ambition to tackle the complex problems that the world is facing (e.g., climate change, health crisis, biodiversity loss); and the need for inclusion of more diverse people in decision-making. Additionally, it is important to think about the future and anticipate those problems, and not just try to solve today's problems. The session concluded with Bachir Kerroumi commenting that we need teachers, researchers and structures to work together with people with disabilities in order to influence the government to make faster progress.

## Key messages/bullet points of the session

- ✓ Support needs to be provided at the different national and regional levels, because there is no 'one-size-fits-all' solution.
- ✓ Money is an important factor when developing a project, but first you need a very good idea and a very good solution.
- ✓ Projects coming from countries and regions that have innovation systems in place (e.g., innovation incubators, advisory services, support for classes) have a much higher success rate than projects coming from regions where this does not function.



- ✓ Regulation and policy can be an enabler, but it can also be a deterrent; it has to be done in a smart way.
- ✓ Risk-taking mindset is lacking in Europe when compared to the United States. The structure of funding contributes to the lack of incentive to take risk.

## Relevant quotes

*'Our investors didn't invest in Single Earth so we would innovate carbon markets, but because we have the potential to create really big change.'* (Birgit Aru)

*'I don't know any "Silicon Valley" which was created by politicians.'* (Gerhard Huemer)

*'Hard to solve things in the long run if you haven't thought of the long run.'* (Narcis Héraclide)

*'Innovation is at the heart of our everyday life and at the heart of our projects. But we need to now have it politically rooted, we need a collective project for society.'* (Bachir Kerroumi)

# Session 1.3. Breakthrough innovations throughout history: definitions, features, opportunities and risks

*Wednesday, 11st May, 2022; 3:30-4:30 pm*

**Bruno Sportisse**, President and CEO Inria

## Session brief

Throughout history and notably since the Industrial Revolution, new breakthrough technologies and production processes have revolutionised our societies and increased prosperity. Breakthrough innovations open up new opportunities to meet society's needs in ways which had not been imagined previously. In this context, what are the characteristics of these innovations (in comparison with marginal, cumulative innovation)? How do they occur? What are their main features? What are their associated opportunities and risks? Are there any success factors to take advantage of them?

## Session summary

Bruno Sportisse gave a brief summary of his varied career. He continued his presentation by discussing the basic idea of innovation, noting that because in the world of public and private funded work, the definition has consequences for the policies that can be put in place. He provided the description that it is an invention that is based on new knowledge, new technology, new patent, for example, and it materializes as a new article. It is a process which is dynamic and collective that leads to an innovation that may have many aspects, including psychological (because there is appropriation involved), social, economic, and political. In addition, there is funding risk (i.e., who carries the risk financially). Innovation is revealed at the end of the process; one only will know if it is a breakthrough innovation if it is used massively, globally and strategically. He is sceptical if it worth having a general approach to innovation because the actors are not the same.

He moved on to breakthrough innovation technologies in the context of 'deeptech' innovations, which has a transfer mechanism between the academic world and economic world. He provided five characteristics:

1. Role of research. There is a need to have higher education at the best level and academic standard. The real promoters of disruptive innovation are the first sponsors of high-level academic research. The challenge is not to have a linear vision for innovation; it does not apply to the digital world and is not effective. The linear model still remains in Europe and is strongly rooted in the industrial world, a very standardized approach.
2. Diversity of paths that technological innovations can take. Examples of paths include open source (dissemination of innovation), standardisation, and technology start-ups. All this is part of the dynamic of transfer, of the move from academic or industrial research to innovation.
3. Role of start-ups in driving disruptive innovation. A start-up is a way of managing a project by embracing all the dimensions that makes innovation possible to disseminate massively. This question of the start-up has several consequences to have an effective ecosystem, allowing an autonomous trajectory; it is necessary to have a financing system. However, some start-ups are destined to be acquired. This culture of acquisition by companies is a real thing to consider and plays a role.
4. Start-ups are led by entrepreneurs. 'Entrepreneurs' in the broad sense of someone who carries a project forward, more than just the business component. He referenced a study that concluded that the entrepreneurs succeed because they are constantly adapting their mode of action and decision-making according to their environment. For this they need a network

and ecosystem. Public policy needs to focus on this, otherwise it will be difficult to be effective.

5. Role of collective dynamics: This covers how ecosystems and networks are leveraged by entrepreneurs to move forward. Success often includes high-end universities, a venture capital industry, sophisticated services in terms of recruitment, legal services, marketing services, and entrepreneurial culture, which are all able to support the growth of young, innovative companies. All of these need ingredients to be present. He added that Europe needs an analysis in banking and finance in order to support a dedicated innovation market; the United States has NASDAQ, Europe does not.

All these 5 fundamentals must have consequences on public policies to support innovation.

The discussion continued and focused on the details of the elements of public policy in three areas:

1. Territorial anchoring/rooting, which is the idea that innovation develops in a territory, an ecosystem, where there are histories, actors, and conditions that are different from other areas. It is tempting to apply a standardized approach from the European level, but one needs to consider the territory-level.
2. Importance of evaluating public policy in favour of disruptive innovation. This requires a deep understanding and assessment of the ecosystems. Measuring the effectiveness of an ecosystem that is based on collective dynamics is complicated. It is possible to evaluate the actors in an ecosystem (the university, venture capitalist, business, public actors) individually, but it is difficult to measure the collective behaviour.
3. Finally, the temptation is often strong for public policies to simplify ecosystems, but this is not worthwhile. There are often proposals at the level of the Member States in Europe to simplify structures. Far too much time is spent evaluating research structures and not enough time is spent evaluating the tools that promote innovation.

He touched on structuring instruments for technological innovation and the recurring question in Europe of whether there is a need for the equivalent of the USA's Advanced Research Project Agency (ARPA). ARPA are agencies that are able to monitor projects over time as part of dynamic and collective processes that lead to breakthrough innovation. He noted that it is often forgotten that in the United States, there is a whole network of thematic agency networks of this type (e.g., energy, intelligence – in the English sense of the term –, biology, and Health – which is under discussion).

The European Innovation Council has an accelerator compartment that was an attempt to change the innovation support paradigm around a few key points: the recognition of technological start-ups as bearers of breakthrough innovations; the ability to support over the long term and through several financing instruments with cross-mechanisms; and the support the readability of entrepreneurs. It is still too early to know what the results will be, but he said that he is convinced that there is a real attempt to change the situation on the support for breakthrough innovation in Europe. Innovation is no exception to the rule: it moves lines and therefore there is resistance. It is also a dissent rooted in institutional politics. It is the execution of this that will tell whether it is a good idea or not. Bruno Sportisse closed by commenting that he is an optimistic.

## Key messages/bullet points of the session

- ✓ Breakthrough innovation technologies in the context of 'deeptech' innovations have five characteristics: role of research, diversity of paths that technological innovations can take, role of start-ups in driving disruptive innovation, start-ups are led by entrepreneurs, and role of collective dynamics.
- ✓ Elements of public policy: innovation develops at territory level, not a generalized European level; important to have a deep understanding and assessment of the ecosystems; temptation is often strong for public policies to want to simplify ecosystems, but this is not worthwhile.
- ✓ Far too much time is spent evaluating research structures and not enough time is spent evaluating the tools that promote innovation.
- ✓ There is a real attempt to change the situation on the support for breakthrough innovation in Europe.

## Relevant quotes

*'We can't tell at the beginning whether an innovation will be a breakthrough or not, we will only know it at the end of the process.'*

*'Ideas are cheap, execution is everything.'*

*'The ability to recognize that failure could be good, because you could learn a lot. But after having said that, that's difficult if you are an entrepreneur and have to reimburse your loans. But I think times are changing, but it is quite slow.'*

## Session 2.1. Breakthrough innovation: key drivers and the role of regions

Thursday, 12th May, 2022; 9:30-10:15 am

- **Jean-Luc Beylat**, VP Ecosystem at Nokia
- **Tommaso Boralevi**, Chief Technology at Lendlease
- **Christophe Clergeau**, Member of the Pays-de-la-Loire Regional Council and Member of the Committee of the Regions
- **Andrea Ruckstuhl**, Head of Continental Europe, Lendlease

### Session brief

Breakthrough innovation is fundamental in increasing prosperity and achieving our socio-economic goals. Ensuring a prompt adoption and scale-up of these innovations is key to reaping the expected benefits. There are key factors which may determine the ability of companies and local areas to do this. Access to finance, the availability of a talent pool, effective pro-innovation regulations, or the existence of a solid set of networks between and across innovators in the area to support innovation diffusion seem to rank highly in this list. At the same time, breakthrough innovations can deeply disrupt existing socio-economic ecosystems and can lead to rejections if they are not properly explained and if transition pathways are not put in place.

### Session summary

This session discussed the main drivers to develop innovation of regions in Europe and why this is important. The speakers talked about the key drivers: development and improvement of ecosystems, risk-taking culture, talent recruitment and retention, and finance.

Jean-Luc Beylat opened noting that we are in a period of much breakthrough transformation of the society, industry, and services and that we need to strongly and carefully address climate change. It is important that we work together to accelerate innovation, which is a solution for these transformations. The strategy of developing ecosystems of regions and partners is key for many companies, including Nokia. The ecosystem approach is key to coming up with solutions. Investment is needed in different regions. Investment with different partners is also important, including small and medium-size enterprises (SMEs), start-ups, academia, and researchers. A crucial element of transformation is speed.

Panellist Tommaso Boralevi has been working on a new type of company, called 'Federated Innovation Network', its mission is to accelerate the innovation process in regions and ecosystems. It does this in a practical way by connecting people, and creating opportunities for them to use the ecosystem infrastructure to have an accelerated pathway to start projects. He commented that to deliver innovation one has to remove 'red tape' and allow people to work together and test projects. He listed the key drivers to innovation as access to talent, connections and networking, capital, and added culture as a new fourth key driver.

Christophe Clergeau highlighted that one of the key factors of breakthrough innovation is that quality ecosystems can encourage creative freedom. Culture is changing and we are gradually moving towards a place-based approach to innovation. He underscored four points. 1) We are not building capacities, but rather, ecosystems. 2) We create networks based on trust, we need to develop a culture of risk-taking, where the risk is shared and failing is part of the process. 3) We need to rely on good leaders and projects, and reward trajectories of excellence. There needs to be investment in local territories; which includes time, freedom and local finance. Finally, 4) It is important to give science and innovators opportunity instead of giving it to the established players; it is worth taking a risk on people who sometime fail.

Andrea Ruckstuhl said that innovation is an important element to Landlease. He concurred with fellow panellists' main points. He highlighted that culture is fundamental; companies need to take risks. Large corporations need to look at their role in society. For example, Landlease's founder said in the 1970s that corporations should not only care about profits, but also the environmental impact. Related, recently Landlease announced that all projects will have zero carbon by 2040. Landlease will need to work as a system to achieve these big goals. It is also key to build partnerships with regions and cities to develop places where innovation is a priority. He emphasised that it is important to build networks which are beyond country boundaries: our biggest opportunity today is to strengthen the European network if we connect minds and talents.

Discussion among the panellists continued. Europe has its challenges. Financing is a weakness when compared to the United States and to China. Europe also needs to increase its coordination between regions and countries.

Tommaso Boralevi commented that Europe needs to pick its battles. The reasons why Silicon Valley was quick to become the global leader in autonomous driving systems, for example, was because of its resources and ecosystem: it was fast, had the talent, had the money, and acquired the best companies from Israel and Europe. Europe has to come up with one mission and decide what it wants to do.

The branding of Europe also was a topic. An idea given was that Europe could create the brand 'European Innovation Project' or similar. Europe is already known

for design, food, fashion, quality of life, but it is not associated with innovation. There is potential benefit if this were developed.

Continuing with Silicon Valley, Andrea Ruckstuhl said that its future is not that clear. It is facing challenges of inclusiveness, increased cost of living, and deteriorated quality of life. He said that one can only live there if one is rich, and he questioned if that is the moral of society. Europe has an opportunity and an advantage to show the world its ability to innovate while caring about society.

Final thoughts of the session were provided by Christophe Clergeau. He commented how local and regional ecosystems want to connect with others in Europe – not only around technologies, but also common goals of a future; and by creating this together, it this brings social acceptance. When confronted with radical transformation, instead of going from point A to an already given point B, we can think differently, and together build a common vision to a new point B. With this new point B, one can invent new disruptive solutions and new disruptive paths to success.

## Key messages/bullet points of the session

- ✓ Development and improvement of ecosystems are key to coming up with solutions to our global challenges. There needs to be investment with different partners, including SMEs, start-ups, academia, and researchers. It is important to build networks which are beyond country boundaries.
- ✓ The culture of risk-taking, where the risk is shared and failing is part of the process, needs to be developed and encouraged.
- ✓ Talent recruitment and retention are essential.
- ✓ Finance and providing capital are key to innovation. Financing is a weakness when compared to the United States and to China.
- ✓ A crucial element of transformation is speed; innovation needs to be accelerated.

## Relevant quotes

*'We need to accelerate innovation which is a solution for all these transformations.... We need to do this collectively. In fact, it is not done by one person, one company. It's really a process which is driven by ecosystems'. (Jean-Luc Beylat)*

*'Innovation is really about a culture. A region that fosters that culture creation is going to have a real advantage to attract and retain the best projects'. (Tommaso Boralevi)*

*'We need to give science, innovators, and minorities an opportunity when they are unorthodox and seem to be foolish, we need to give them a chance. Advice to those who manage funds ... put one third to one fourth of what you invest to explorative ideas/on crazy new ideas'. (Christophe Clergeau)*

*'Each of these initiatives or ecosystems become stronger if we connect them beyond country boundaries, beyond local places'. (Andrea Ruckstuhl)*

## Workshop 1. Access to Finance

*Thursday, 12th May, 2022; 10:45 am-12:00 pm*

*Moderator: **Michel Mariton**, Economic Development Vice-President, Université Paris-Saclay*

*Panellists:*

- **Tommaso Boralevi**, Chief Technology at Lendlease
- **Christian Dubarry**, Head of the European affairs and international relations unit at Bpifrance
- **András Inotai**, Head of Unit, Innovation Policy & Access to Finance, European Commission, Directorate General for Research & Innovation
- **Andrea Ruckstuhl**, Head of Continental Europe, Lendlease

*Reporter: **Olivier Mallet**, Deputy Head of Unit – Open Innovation and Collaborative Research, France Ministry of Higher Education, Research and Innovation*

### Session brief

The European Union has just as many start-ups as the United States but only a few of them are able to scale up rapidly. This is especially the case for start-ups carrying out breakthrough innovations which establish new markets. There is more start-up funding in the European Union than scale-up funding. In particular, late-stage investment rounds in start-ups are fewer and smaller in Europe, compared to other regions. Causes include insufficiently deep and liquid capital markets providing risk finance, unattractive IPO (initial public offering) conditions, unequal geographic activity of funding and intermediaries, limited investment by pension funds and (life) insurances in risk capital markets, remaining fragmentation of the internal market in certain areas and regulatory burden.



## Session summary

Discussions in this session were organised around the key issue of scale-up funding. On the plus side, a positive trend has emerged in recent years with regard to generating start-ups in Europe. In the global landscape, European Union countries are more competitive and performing better in the field of innovation, more so than in the past. Investments, particularly in the early stages, are steadily increasing. At the same time, a range of tools are currently available and more are being developed throughout Europe. A detailed presentation was given on the Deeptech plan, launched in 2019 and operated by Bpifrance, which set the general objective of financing the creation of 500 deeptech start-ups per year by 2025. Key targets also include building industrial leaders of 10 deeptech unicorns by 2025. An ambition that is well on the way, as France already counts numerous unicorns in the deep-tech sector. On the European scale, the European Innovation Council (EIC) also plays a catalytic role in assisting start-ups by providing funding opportunities, and by attracting potential private capital.

While there is evidence that undisputed progress has been made, in terms of the amount of funding going into start-ups, the European ecosystem still lags significantly behind the start-up scenes in the United States. The issue is even more acute where scale-ups are concerned. This scale-up gap is mainly caused by a lack of funding generally available for European firms, and the delays in the acquisition of the funding when made available. Although access to capital is the main obstacle, time consumption and cost are also a huge barrier to scaling up in Europe. Consequently, these firms grow less quickly than their competitors, which constitutes an issue in today's highly competitive market. In these circumstances and given the current market situation, the strategic approach adopted is to seek sources of funding outside Europe. Continuing in this fashion and the risk is that Europe will be regarded as a 'nursery' for overseas investors. The lack of financing options often implies that companies sell earlier. Acquisitions are frequently made by foreign buyers.

The panel thereafter focused its discussions on how to improve the system. The speakers were guided to share their findings and valuable insights, in particular on how authorities, such as private-sector actors, governments and the European Commission, can effectively tackle present and future challenges. One of the challenges is to encourage institutional and private sector players in orienting more funding towards scale-ups. To this aim, the European Tech Champions Initiative (ETCI), that was launched some months ago, is certainly a step in the right direction. Beyond these considerations, regulatory policies and tax incentives also represent another avenue to explore. This could help to facilitate citizens' investment, stock exchange introductions, and to develop a functioning European risk capital market to reach a critical size.

The panellists also emphasised the importance of non-financial support, so as to enable them to navigate through the European innovation landscape, and to find the right resources at the right time. They also underlined the necessity to work on a sense of belonging, and to bridge the gap between European firms and the territories.

## Four key messages/bullet points of the session

- ✓ Access to finance is one of the predominant framework conditions for the realisation of scale-ups. Europe has a lack of lead investors backing deeptech start-ups.
- ✓ While there is evidence that the European ecosystem for start-ups has improved, the scale-up gap between the European Union and its most direct competitors, such as Asia and the United States, remains large.
- ✓ In order to support and accelerate the funding dynamics, a wide variety of tools have been implemented and more are being developed throughout Europe, among them the Deeptech plan and the EIC fund.
- ✓ Start-ups also need to be provided with a huge amount of additional non-financial support. Access to finance is only one part of the problem.

## Relevant quotes

*"Where real economy is generated, new employment is generated and new economy is generated. This is probably where I see the future of Europe going."*  
(Tommaso Boralevi)

*"There is a need for a complementary public activity supporting companies directly by investing in them in equity, alongside the private sector."* (Christian Dubarry)

*"The money is out there. The question is how you can target and direct that money towards addressing in particular the scale-up problem."* (András Inotai)

*"Ultimately, a true venture capital should be a life partner to allow a great idea to reach maturity and beyond."* (Andrea Ruckstuhl)

# Workshop 2. The Regulatory Environment: focus on Intellectual Property

Thursday, 12th May, 2022; 10:45 am -12:00 pm

Moderator: **Patrick Duvaut**, Vice-President, Université Paris-Saclay, Foundation Head at Université Paris-Saclay

Keynotes:

- **Jean Lapousterle**, Professor of Private Law at Université Paris-Saclay, Director of the Centre for Studies and Research in Immaterial Law (CERDI)
- **Antoine Latreille**, Professor at Université Paris-Saclay, Vice-President Heritage & Infrastructures, Researcher at CERDI
- **Pierre-Emmanuel Moyses**, Associate Professor at the McGill Faculty of Law

Panellists:

- **Yann Dietrich**, Group Head of Intellectual Property at Atos
- **James Lawrence**, French and European Patent Attorney at Ipsilon
- **Anne-Catherine Milleron**, Head of Europe for Economic Action at INPI (Institut National de la Propriété Industrielle)
- **Folkert Teernstra**, Sr IP Legal Counsel at TNO, Co-chair of the WG Legal of EARTO

Reporter: Pierre-Emmanuel Moyses, Associate Professor at the McGill Faculty of Law

## Session brief

The workshop will address the reciprocal causal links between disruptive innovation and intellectual property regulation. It will look at how, on the one hand, IP regulation can boost disruptive innovation value chain and how, on the other, IP regulation needs to be disrupted to adapt to the pace, depth and breadth of the ongoing tech & usage revolutions of the 21<sup>st</sup> century, such as the overall importance and centrality of intangible assets for current and future companies triggered by a knowledge-based economy and the related need to establish incentives for the promotion of these assets as main value drivers.

## Session summary

During this session, panellists discussed whether intellectual property was an incentive or an obstacle to innovation and presented regulatory tools available to innovators and creators including patents, copyright, the European data act, trade

secrets and fair competition. The speakers agreed that IP is still pivotal for some industries and remains a viable option for innovators. In a world where most new creations will be Internet native, IP needs protecting as it is being challenged but has not yet been defeated.

When thinking about patents, the State is often overlooked, but it is especially important when it comes to building infrastructure. Private companies rely on their contribution to the innovation ecosystem. Furthermore, the overall awareness and education in terms of IP is key for innovators, both in terms of showing its potential and limitations. However, one of the major hurdles remains the complexity of patent filing systems. On top of this, many new technologies use hundreds of patents for a single item. To illustrate this issue, the group gave the example of mobile phones. Creators use over 200 patents to make a phone and rely on mobile operators to provide the infrastructure which enables citizens to use them.

Other alternatives to IP were mentioned, such as blockchain or trade secrets. Both have their pitfalls. Lots of counterfeit patents can be found on blockchain, which prove to be almost impossible to destroy. As for trade secrets, employee mobility makes it difficult to trace, control, and manage them for the cooperation. The 'zombie employee' phenomenon is also problematic: their ideas can be infected by past knowledge from previous employers, thus increasing the risk of litigation for their current employers.

In terms of regulations, framework is often a bit behind, but that is not necessarily a bad thing. Regulation is always hard to approve but is a requirement to bring security and safeguards to the market. Regulatory sandboxes could help to produce more efficient norms and increase acceptability. The proposal for an artificial intelligence act hopes to create innovation-friendly legal framework which will be resilient to disruption.

Another proposal was to create a patent pool where creators could purchase all the patents needed for a single project. The Unified Patent Court should also achieve the harmonisation of patents throughout Europe. A third useful alternative to IP law is unfair competition. It would be a means of creating a level playing field for all creators.

To conclude, panellists brought attention to the need to raise awareness to IP. INPI is currently working on incentives to help people to protect their innovations and to gain competitiveness in our globalised world. The future looks promising for creators and their innovations whether they use IP or an alternative.

## Four key messages/bullet points of the session

- ✓ IP needs protecting as it is being challenged but has not yet been defeated.
- ✓ Filing for patents still takes a long time, panellists put forward the possibility of AI automated patents in the future to save time.
- ✓ Many alternatives exist to IP, each with their own pros and cons.
- ✓ Regulations are still hard to approve, but they provide security. New organisations and legislation are being proposed and put in place to improve IP.

## Relevant quotes

*'Trade secrets are a useful tool to protect disruptive innovation.'* (Jean Lapousterle)

*'Computer implemented innovations are potentially patentable as a process innovation.'* (Antoine Latreille)

*'Indeed, no reward set by law can replace the genius and solving capacity of the human mind, let alone an artificial one, but regulation can perhaps set things in motion, bring social concerns in the fabric of innovation.'* (Pierre-Emmanuel Moysé)

*'When we want to move quickly, when we believe that speed is more important than protection, we find solutions.'* (Yann Dietrich)

*'We are seeing a lot of innovation in our work. We talked about the Unified Patent Court which is coming into effect at the end of the year, this is going to be very promising.'* (James Lawrence)

*'At INPI, we are working on a lot of incentive services to help people to protect their innovation and to gain competitiveness in this globalised world.'* (Anne-Catherine Milleron)

*'Legislation and regulation should never be disruptive. It should be predictable; it should be clear to all the users; and it should never offer a surprise to the market.'* (Folkert Teernstra)

# Workshop 3. Research excellence and the creation, development, and retention of talents

*Thursday, 12th May, 2022; 10:45 am -12:00 pm*

*Moderator: **Bernard Yannou**, Professor and Deputy Director of Research at CentraleSupélec/Université Paris-Saclay*

*Panellists:*

- **Solange Chavel**, CEO, SIRIS Academic
- **Philippe Dufourcq**, Deputy Director General of Centrale Supélec
- **Apostolia Karamali**, Head of Unit, Research and Innovation Actors and Research Careers, DG R&I, European Commission
- **Arnaud Leservot**, Project manager at the Ministry of Higher Education, Research and Innovation
- **Luca Perego**, Head of Unit 'Innovation and EIT' in the Directorate General for Education, Youth, Sport and Culture of the European Commission

*Reporter: **Chiara Aprea**, Policy Officer, DG Research and Innovation, European Commission*

## Session brief

Breakthrough innovations need at least two conditions in order to emerge: high potential research areas and talent creation. Both of them are linked, although the means to achieve them are not; high potential research areas need to benefit from synergies coming from the existence of different stakeholders, and talent creation needs to attract and retain the right talents, including those from outside the European Union. Notwithstanding existing successful initiatives in the European Union and within the Member States, there remains a need to build entrepreneurship and innovation capacity in vocational education and training programmes, as well as in higher education and research/academia.

## Session summary

During this workshop, panellists discussed the importance of research and Europe's talent pool. Breakthrough innovations require at least two conditions to emerge: high potential research areas and tailored creation. High potential research relies on synergies coming from different stakeholders, as for tailored

creation, it needs to retain the right talents, including those from outside the European union. So how can Europe develop entrepreneurship, innovation capacity, vocational education, and training programmes?

Over the last few years, the share of researchers in Europe has increased, but at the same time, member states are performing differently, including at a regional level within each member state. However, job opportunities within Academia are decreasing. A gender gap is also noticeable in patent applications with women and people from diverse backgrounds still being underrepresented. The same thing can be said about labour market skills: there is currently high demand for business administrators, but fewer female graduates are applying.

To improve the situation for researchers, there is a need to boost skills, finance tools, and bridge the gap between higher education institutions and industries. Discussions are currently ongoing to strengthen cooperation between member states and stakeholders with a strong focus on cohesion and the territorial dimension. Furthermore, European framework for research careers is being strengthened to help with recruitment, career progression, skills, mobility, support, and broader monitoring. Researchers need lifelong training and lifelong learning to be able to create their own businesses, especially when small and medium sized companies are the backbone of the single market.

Moreover, higher education institutions still lack the culture of entrepreneurship and innovation. Students need to foster certain skillsets so as not to lose them in Europe. Talents also are unequally distributed across European Union countries and regions, many HEIs being in major cities. Different initiatives are attempting to solve these disparities, such as the European Institute of Innovation and Technology, which integrates education into the innovation ecosystem, or knowledge and innovation communities (KICs) which promote partnerships between HEIs, leading companies, and research labs.

Another aspect brought up during the discussion was French big science and research infrastructures that are at the frontier of science. These infrastructures train and retain talents in Europe. The main question now is how to move them to the frontier of industry. Disruption in the industry does not necessarily lead to destruction, thus the creation of a big science innovation studio in Europe could possibly help to bridge the gap between scientific discoveries and industrialisation whilst building a new market in the European Union.

The way Europe broaches the subject could be the reason for the gap between what is needed and what is being bridged. Implementation can be very contextual and demanding brilliance from students could lead them to think that their idea is not good enough, or to more hype than real ideas. HEIs are combatting this by looking into how students are being encouraged to create start-ups. Schools need to raise awareness, customise PhD training by taking into account specific

scientific fields, and coach students to hopefully create the next generation of entrepreneurs.

2022 is the year of the youth, so creating platforms, and incubators could make a difference. Creating new opportunities, making younger generations dream of innovations and shifting mindsets is the best message of hope.

## Four key messages/bullet points of the session

- ✓ Retaining talents still proves to be problematic, mindsets need to change, and institutions need to be set up to help resolve the issue.
- ✓ Researchers require lifelong training and encouragement to become the next generation of entrepreneurs. Providing them with the right opportunities will help to attract and retain them.
- ✓ Europe has strong ties to scientific discoveries but needs to bridge the gap between innovation and industrialisation.
- ✓ Europe must boost skills in its regions, finance tools for students, and bridge the gap between HEIs and industries.

## Relevant quotes

*'We need talents, and we need the right incentives, and we need the right funding mechanism.'* (Solange Chavel)

*'To become an entrepreneur, you need time.'* (Philippe Dufourcq)

*'We are performing very well, but we could do better.'* (Apostolia Karamali)

*'We have to make people dream with our innovation.'* (Arnauld Leservot)

*'It is really clear in the call for evidence that talent is one of the five broad action areas that are essential for boosting Europe's innovation performance.'* (Luca Perego)

# Workshop 4. Social acceptance of breakthrough innovations

Thursday, 12th May, 2022; 10:45 am -12:00 pm



*Panellists:*

- **Antoine Hubert**, Co-founder, President and CEO of *Ÿnsect*
- **Philippe Lemanceau**, Vice-President of *Dijon Métropole* in charge of the food transition, the Territorial Food Plan, and the collective catering
- **Valérie Nicolas-Hemar**, Associate Professor in Management Sciences, *Université Paris-Saclay*

*Moderator & Reporter: Eric Cassan*, *Université Paris-Saclay* deputy Vice-President for European Affairs

## Session brief

The social acceptance of breakthrough innovation is a key factor for their diffusion to final users. The modification of final uses from consumers is often the last barrier in allowing breakthrough innovation to expand. Through European examples, this workshop will look at the barriers to breakthrough innovation.

## Session summary

The main objective of this session is to widen the scope or meaning of innovation, to include social and societal acceptance. The panel's discussions focused on the main challenges regarding food, such as nutrition production and sustainability, through both economic and social considerations.

*Ÿnsect*, French company founded in 2011, aims to reinvent the food chain from soil to plate, and now focuses on human food and the alternatives possible to animal protein. Nevertheless, the acceptance of these alternative human foods, such as insect food, is yet to be reached. The company adopted an incremental approach: the products are tested in order to be integrated in everyday cooking. The plant-based sector proved that storytelling is critical when trying to make marginal food mainstream. *Ÿnsect's* goal is to move from traditional to modern consumption of insects in food. The company works in different international farming areas and exports its products. In order to boost the acceptance of insect food, *Ÿnsect* invests in consumer knowledge and product innovation with universities. However, communication and marketing need to be further emphasised, even though some ambassadors, like chefs and actors, help to promote these products. The Paris 2024 Olympic Games will provide an excellent opportunity to communicate on nutrition.

The components of the insect food produced are explicitly marketed to the consumers. The present issue is to either engage in the mimic of existing meat products or develop new products with different tastes. So far, consumers want

to keep the taste of meat products: testing new alternatives to increase the diversity of products and the acceptance of people is yet to be achieved.

Continuing on sustainable food consumption, the Cricket program aims to understand how European consumers could be willing to eat insects in their everyday diet. This kind of innovation is not only technological, but also social: it requires consumers to adopt new behaviour patterns. It also means changing their mental representation and the symbols associated with insects. The program analyses the emotions and representations directed towards new food in order to understand the cultural meaning behind rejection and change it. In order to make western consumers eat insects, innovation diffusion works to make innovation compatible with consumers' values, practices and needs; expose the relative advantage of eating insects; understand their use and make it socially acceptable through communication; and encourage the continuous exposure to this food; and make the positive effects of this food visible. Once again, the marketing of these products is crucial. The research program focuses on packaging and media representation.

The speakers then argued that, in order to achieve the mainstreaming of insect food at a local level, the European food regulation should evolve and authorise the consuming and marketing of insects. The discussion followed on the regional aspects of food transition, specifically in Dijon, France. Food transition has a positive impact on the environment, the local economy and social cohesion. In Dijon, this transition aims to improve nutrition for all, through better products and the stimulation of the agricultural transition. Consumers are the beneficiaries, as well as the actors of the territory. The living lab encompasses different actors to work on the matter to strengthen their position in the innovation processes and co-create the practices. As well, the lab looks to make alternative food more accessible in order to meet the food behavioural challenge.

The participants asserts that the strong relationship between the producer and the consumer is at stake. Dijon Metropole wishes to promote agroecology in response to the citizen's demand for more local food. With regard to accessibility of food, 35% of the population do not eat the number of vegetables per day needed. Dijon Metropole is thus working to involve citizens in the growing process of vegetables, to make them benefit of the food transition.

Common indicators are needed to evaluate the impact of these actions. A food observatory has been developed to assess the impact of environmental policy on local economy and social cohesion. This technology, together with the action of academic and private companies, will have a return on investment when the program is applied to other territories: it is a demonstrator of successful shared innovation.

## Four key messages/bullet points of the session

- ✓ Research needs to be conducted in order to evaluate the effects of the projects looking to engage societal change and develop the acceptance of the innovation of society.
- ✓ The population has to be informed of the innovation in order to make them actors of this evolution and dissipate the risk of misunderstandings.
- ✓ Local actions are trustable, thus need to be developed and encouraged.
- ✓ Innovation approach needs to engage public and private actors in order to achieve the food innovation goals: accessibility and acceptance of new and better local food for all.

## Relevant quotes

*'Storytelling is critical when looking to sell alternative food, issue that has been proved by the plant-based sector.'* (Antoine Hubert)

*'Food innovation is social, and not exclusively technological: it requires consumers to adopt new behaviour patterns, and change their mental representation of new food.'* (Valérie Nicolas-Hemar)

*'Food transition should be for all whatever their income, age, or even handicap.'* (Philippe Lemanceau)

# Session 2.2. Breakthrough innovations and Europe's strategic objectives. The role of regions

Thursday, 12th May, 2022; 2:30-3 : 15 pm

**Pierre-Alexandre Balland**, Professor — Utrecht University & Artificial and Natural Intelligence Toulouse Institute

## Session brief

Breakthrough innovation is key to achieving Europe's strategic objectives in a rapidly changing and increasingly uncertain international context. The competitiveness of the European Union is at stake, as well as its capacity to be a

key player in future international relations. In this context, the question of Europe's industrial production capacities is crucial. Regions will be major actors in this process and will need to be mobilised to ensure a prompt adoption of new breakthrough innovations. Moreover, breakthrough innovations will be key to achieving Europe's green transition. This plenary session will set the backdrop for the breakout workshops which will take place after.

## Session summary

Pierre-Alexandre Balland mentioned that he has a United States and European perspective as he has spent half of his career in the United States and the other half in Europe. He is an academic and entrepreneur.

How can Europe leverage the wealth of talent and capital, to achieve the level of innovation that we should expect in European Union global leadership? This problem is not at the individual level, but at the systemic level.

Global innovation consumption is increasing. Knowledge consumption is extremely global, and its globality is increasing. This means that it is getting easier for companies to reach everyone in the market. This contrasts with the fact that innovation is increasingly local in terms of production. The people who produce are clustered in only a few places. For example, the top five cities produce 20% of all innovation. This world that we live in is shaped by very few companies and very few people. The tension between global innovation consumption and local innovation production means that we urgently need to develop European Union – level strategy to achieve global leadership in key technologies.

Pierre-Alexandre Balland used Google as an example of a feedback loop. If a company has a small comparative advantage at the beginning, it means that it gets more customers, which gets more data, which creates a better algorithm, which creates a better product, which then attracts more customers. This results in a 'winner takes all'-world. If Europe does not innovate at the global level, then it is going to be consumers of technologies. It then can only regulate these technologies. Europe as a whole has to come together to develop a European Union strategy.

He presented a graph that shows that the more complexity in technology, the more concentration in region. This means that innovation strategy and policy have to take into account geography at the regional level, not national level. The strategy needs to come from the European Union, not the country. Currently, too many resources are at this national level (e.g., there are separate French, German, and Spanish artificial intelligence – AI – strategies), we cannot achieve the scale that we need at the European Union level if we continue to think at the national level. We need to work together to figure out how connect regions together.

Europe needs to prioritize which technology areas it is going to heavily invest in. And then it needs to determine which regions to invest in. If you know where to invest, you can save a lot of resources. Tools exist to help with this. There are different regions in Europe that have the potential to become strong in different technologies; for example, AI, batteries, and blockchain.

Pierre-Alexandre Balland commented that if he had to pick two technologies that are going to completely change our lives in the next ten years, he would pick AI (related to automating predictions) and blockchain (automating transactions). He thinks that Europe needs to be a leader in these areas.

He continued and emphasized that scientific leaders do not necessarily become technological leaders. There is inability in some places Europe to translate great science into innovation and entrepreneurship. This contrasts with the United States, where some professors have one foot in academia and one foot in entrepreneurship. For example, at MIT there was an incubator in the building; students would start companies out of research projects.

It is extremely important to assess the level of complementarity between European Union regions. For example, top connections of French regions are fellow French regions; likewise with Germany. This shows that there is redundancy and inefficiency.

It is known that Europe is not strong at attracting and retaining talent. France, Italy, Germany, Spain, Austria, and Ireland are all losing their inventors while the United States is attracting talent. Europe needs an ambitious strategy to attract and retain talent if it wants to be a leader. China has acknowledged its gap and is working on recruiting talent (one way is by matching salary along with a one million dollars in relocation fee). Europe is not doing as much as it could to attract top scientists and inventors. If you can't match the salary, it will be hard to attract talent. He believes Europe has enormous potential: the world does not know how good the life is in Europe.

Pierre-Alexandre Balland commented that he does not think one should not regulate, but that in the balance there is too much regulation in Europe and maybe not enough on facilitating innovation. He used the example of GDPR (General Data Protection Regulation).

## Key messages/bullet points of the session

- ✓ Innovation is incredibly concentrated: the world is shaped by very few companies and very few people.
- ✓ The tension between global innovation consumption and local innovation production means that we urgently need to develop European Union – level strategy.

- ✓ A company with a small comparative advantage at the beginning can result in a winner takes all company.
- ✓ Innovation strategy and policy have to take into account geography at the regional level, not national level.
- ✓ Europe needs to prioritize which technology areas it is going to invest in heavily. And then, it needs to determine which regions to invest in.
- ✓ Scientific leaders do not necessarily become technological leaders.
- ✓ Europe needs an ambitious strategy to attract and retain talent if it wants to be a leader.

## Relevant quotes

*'One of my frustrations when I'm in Europe, is that we have so much talent, so much research excellence that does not always translate into innovation outcome that we should expect'.*

*'We cannot win this race if we don't have an absolutely, incredibly, ambitious strategy to attract and retain talent'.*

*'Quality of life is something that we should not underestimate in terms of assets of Europe'.*

*'Do you want this technology to be built in Europe and have European jobs and European values, or do you want to be regulating TikTok?'*

# Workshop 1. Industrialisation of breakthrough innovation in Europe

*Thursday, 12th May, 2022; 3:30-4:30 pm*

*Moderator: **Olivier Jehin**, Independent journalist*

*Panellists:*

- **Valérie Bouillon-Delporte**, Hydrogen Ecosystem Director at Michelin
- **Capella Festa**, Chief Operating Officer at Genvia
- **Hortense Lutz-Hermellin**, Head of Brussels's Office for Auvergne-Rhône-Alpes Region, Chair of ERRIN
- **Christophe Maleville**, Senior Vice President of Soitec's Innovation

- **Kieran Mccarthy**, *Independent member of Cork City Council, Member of the European Committee of the Regions (CoR)*

Reporter: **Valérie Michaut**, *Project Manager, European Innovation program Sub-directorate of innovation, Directorate General for enterprises, Ministry of Economy, finance and recovery*

## Session brief

Innovation and industrial policy are closely intertwined, to allow all stakeholders and regions to benefit from it. Breakthrough innovations introduce completely new industrial questions, leading as a result to the development of entirely new production systems. What are the specific characteristics of these breakthrough innovations in terms of industrial policy?

## Session summary

This session focused on breakthrough innovations and their industrialisation, specifically regarding companies interested in the different uses of hydrogen, the complexity in process industries and how government bodies support them. Concrete examples of breakthrough innovations illustrated how these innovations are highly characteristic, particularly in the industrialisation phase.

As a first observation, the panellists shared the assessment that the research and development (R&D) phase, which is by its very nature long-term, is now very well supported at both national and European level. The tools made available to support this R&D phase are adapted and seem to be working well. However, this supporting R&D is only a part of the problem since breakthrough innovations are generally high risk, difficult to explain – because the market is not yet mature –, and also require a lot of capital. These characteristics have a direct impact when these different innovations are industrialised. Consequently, achieving funding proves to be a difficult hurdle, particularly at the phase that follows R&D and before the industrialisation phase in terms of volume. This pilot phase is a difficult barrier to overcome. Hence, as a result, public support is crucial. Investors really need to be reassured at this point through concrete public policies that share the business risks. The speakers argued that lots of optimisation can still be done to scale it up, improve the understanding of deployment and to make sure that products are innovated in an appropriate way. Research and clear strategical models can solve these issues and simplify the industrialisation phase.

At European level, the IPCEI (Important Projects of Common European Interest) tool receives high praise as it provides helpful support opportunities for this breakthrough innovation project. However, speakers have all expressed that this instrument is quite complex to implement. This complexity affects the rate at

which innovations can be industrialised. Another negative aspect is that this intricacy makes the IPCEI even less accessible to SMEs. It was therefore agreed that the procedure should be simplified in order to make IPCEIs more accessible and better tailored to the needs of SMEs.

All the participants noted that the support and the organisation of regions are essential. A number of examples were presented, in particular by the Auvergne-Rhône-Alpes region. The region's aim of promoting reindustrialisation and its willingness to encourage cooperation between the different ecosystems and bring them together has enabled industrialisation projects to emerge and survive in the long term.

Regarding the criteria for successful industrialisation, it was agreed that time is of the utmost importance. Missing out on funding or taking too long to industrialise can set companies back years. As well, cost and yield can be detrimental to innovations.

## Four key messages/bullet points of the session

- ✓ Funding and investment are key when it comes to innovations. Europe has very good models for the funding phase, but the development stage is harder.
- ✓ Communication is of the utmost importance when it comes to innovation. Whether it be telling citizens about different existing policies or cross-border communication, legislation and regulations need to be put in place to ensure that everything runs smoothly from innovation to industrialisation.
- ✓ Smaller regions and cities should not be cast aside. Some are even focusing on reintroducing industries and skills to their areas.
- ✓ A lot can still be done to improve the different stages from innovation to industrialisation – lowering costs, getting enough funding, respecting deadlines.

## Relevant quotes

*'The responsibility is to reduce uncertainty and to give visibility to industry.'* (Valérie Bouillon-Delporte quoting Frans Timmermans)

*'In terms of meeting the market, pace is enormously important.'* (Capella Fest)

*'Year after year, by using this innovation approach, pilot phase, we have been able to implement way more quickly our new materials.'* (Christophe Maleville)



*'As a region, we try to connect all stakeholders at a regional level, but we also try to connect them with other regional ecosystems in Europe.'* (Hortense Lutz-Hermellin)

*'We need to continue listening to each other and collaborating with each other because it is working.'* (Kieran Mccarthy)

## Workshop 2. Europe's strategic autonomy

*Thursday, 12th May, 2022; 3:30-4:30 pm*

*Moderator: **Mathieu Rouault**, Journalist at Grand Labo*

*Panellists:*

- **Marc Lesturgie**, Director of International Affairs at ONERA
- **Jocelyne Wasselin**, Chief Executive Officer at X-Fab France

*Reporter: **Michel Mariton**, Economic Development Vice-President, at Université Paris-Saclay*

### Session brief

Over the past few decades, the interdependencies of our regional economies have increased significantly and benefited from growing global economic specialisation. At the same time, the Covid pandemic has also demonstrated the vulnerabilities of these interdependencies and the need to ensure greater autonomy in Europe in key strategic sectors, from microchips to medical material.

### Session summary

During this session, panellists began by presenting their companies before delving into discussions about Europe *versus* the world and the next challenges interdependencies will face.

One of the first observations made was the effect new technologies have on companies. For example, X-Fab is beginning to earn more revenue with products designed for the automotive industry. In accordance with this new growth, more and more young researchers are yearning for international exposure. ONERA is improving Europe's attractiveness for younger generations through their work: involvement in NATO sciences and technology; the economical dimension of partnerships; benchmarking technologies, etc.

Nowadays, companies are faced with many challenges, two of the main ones in the semi-conductor industry are customers and the need to increase capacity. Demand is so high that companies cannot always keep up, this leads to a lack of confidence from customers who fail to see the time needed to hire new employees to take on the extra workload. Another challenge this type of industry faces is the lack of manufacturers in the country. The current delay is two years between ordering and delivery. If ever the supply chain were to be increased in France, the delivery times could be reduced. The same thing can be said about maintenance skills. The country is lacking in this domain which makes it harder and longer to get repairs. The return of R&D centres in France and Europe could help to solve dependency issues in the future. Collaborating without revealing industry secrets also proves to be difficult in this day and age. Companies strive to protect their intellectual property whilst also sharing data from their research.

The participants, thereafter, addressed Europe's strategy and the need to simplify access to subsidies. GPAC is mentioned and the struggles to understand what exactly it will finance. Team Europe can also be perceived differently by industries. Some view it as a worldwide entity rather than solely European. Companies can reap the benefits of this organism and double the success rates of European contracts. Other types of organisations, such as the International Forum, enable researchers to discuss technological issues in a non-competitive way. European countries can have a major impact in various domains by working together.

Innovation is a science and relies on three stages: developing something new, infrastructure, and finding how to go from a concept to a product. However, another huge challenge is the lack of awareness students have concerning existing technology and innovations in Europe. Many leave for Silicon Valley following their degree, as sadly Europe cannot compete with the salaries over there. This being said, Marc Lesturgie stated that ONERA has less trouble attracting young talents in domains where it is possible to write papers and attend conferences, but has a harder time retaining them for longer than five years due to lower salaries. Thus, raising awareness to avoid a brain drain is of the utmost importance.

The French government understands the challenges that companies are facing. The current climate has brought light to these issues. Companies have a voice and need to start asking the right questions about their future.

## **Four key messages/bullet points of the session**

- ✓ European countries are still dependent on the world in many domains. If certain skill sets were to return to the continent, the creation process could speed up. On top of this, a dilemma still exists when it comes to sharing information and safeguarding intellectual property.

- ✓ European funding tends to increase the success rate of contracts. Simpler policies to access funding could lead to more cooperation.
- ✓ France and Europe need to bring more awareness to careers involving innovation and technology in order to avoid a brain drain.
- ✓ Although the current climate is not ideal, companies can benefit from it by asking pertinent questions about the issues they face.

## Relevant quotes

*'Innovation must be supported by public funding.'* (Marc Lesturgie)

*'The medical segment is another area where European countries can make a difference if they work together.'* (Jocelyne Wasselin)

# Workshop 3. Europe's green transition: the role of EU Missions

Thursday, 12th May, 2022; 3:30-4:30 pm

Moderator: **Markku Markkula**, Vice-president of the European Committee of the Regions (CoR)

Panellists:

- **Louise Drogoul**, Advisor for Innovation & Sustainability at CESAER
- **Pirita Lindholm**, European Regions Research and Innovation Network (ERRIN) Director
- **Neville Reeve**, Principal Missions Coordinator at Directorate-General for Research and Innovation, European Commission

Reporter: **Olivier Mallet**, Deputy Head of Unit – Open Innovation and Collaborative Research, France Ministry of Higher Education, Research and Innovation

## Session brief

Europe has committed itself to achieving the Green Deal, and its growth strategy is a green growth strategy. Delivering this intergenerational promise will require diffusing a vast number of breakthrough innovations rapidly to all sectors of our economy and society. To ensure the mobility of production factors, the manufacturing and transmission of energy solutions will need to be compatible

with the Green Deal objectives. In this context, societies and governments will have to drive these breakthrough innovations.

## Session summary

This workshop focused on the green transition, how people can support it, and how it can be based on breakthrough innovation whilst also creating breakthrough innovation to meet targets.

Horizon Europe is financing five very ambitious goals to reach within the next decade:

- Adaptation to climate change: support at least 150 European regions and communities to become climate resilient by 2030;
- Cancer: working with Europe's Beating Cancer plan to improve the lives of more than 3 million people by 2030 through prevention, cure, and solutions to live longer and better;
- Restore our ocean and waters by 2030;
- One hundred climate neutral and smart cities by 2030;
- A soil deal for Europe: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

The missions all have long-term objectives, a significant change is needed to achieve them. All are rooted in research and innovation, and aim to mobilise regions, territories, and citizens in order to be as systemic as possible in solving problems. Regions potentially have money to invest in the targets, most of them already being centred around their priorities, they just need a helping hand in understanding how and why they should help.

One of the missions is to reach 100 carbon neutral cities by 2030. There is a great sense of urgency to work towards climate neutrality. This target is especially ambitious and requires radical change, new mindsets, collaborations, and breakthrough innovations. Not only is there a need for technology, but also a complete revolution in the way that people live, i.e., governance and financing. Frontier research and disruptive innovation go hand in hand and are essential to deliver sustainability. The Climate City contract can help to bring local ecosystems together to achieve carbon neutrality.

The aim of these incentives is to raise awareness in territories to enable territorial actors to seize them and contribute to them at a global level. Furthermore, having an ecosystem approach to the missions will make them more effective. Ensuring

a balance between top-down strategies and bottom-up approaches is a must. Thus, on a societal and political level, there needs to be an open and evolving discussion on the topic of societal priorities and rules. Governments are required to support the missions at a regional, national, and European level. Researchers and universities also play a significantly important role as they link research and society as a whole. They need to take risks and assume responsibility by creating the right framework and new mindsets for breakthrough innovation.

Over recent years, artificial intelligence has made it possible to create R&I portfolios. This enables people to look into what has been funded and supported throughout the years and make informed decisions about the missions.

These five missions are a solid and efficient way of accelerating innovation, supporting and connecting local ecosystems, and displaying Europe's leadership regarding sustainable development targets.

## Four key messages/bullet points of the session

- ✓ Five very ambitious goals involving health and ecology have been financed by Horizon Europe and need to be reached by 2030.
- ✓ Younger generations are more aware of the problems climate change poses. Training should also be given to teachers who need to adapt curriculum and help make changes for a sustainable future.
- ✓ Regions can assist in reaching the five targets by helping to fund the changes that need to be made.
- ✓ Everybody needs to be involved, from citizens, to governments, to researchers.

## Relevant quotes

*'It is not only about the technology itself, but about going further with the technology to be integrated within society for it to become more sustainable.'*  
(Louise Drogoul)

*'There is a great sense of urgency to work towards climate neutrality.'* (Pirita Lindholm)

*'With being targets with long-term objectives, this is about ambition and, of course, you need a significant change to achieve them.'* (Neville Reeve)

# Workshop 4. Europe's territorial cohesion: ensuring the diffusion of breakthrough innovation throughout Europe

*Thursday, 12th May, 2022; 3:30-4:30 pm*

*Moderator: **Magda de Carli**, Head of Unit, DG Research and Innovation, European Commission*

*Panellists:*

- **Anna Panagopoulou**, Director for European Research Area & Innovation, Directorate General Research & Innovation, European Commission
- **Christophe Clergeau**, Member of the Pays-de-la-Loire Regional Council and Member of the Committee of the Regions
- **Bogdan Chelariu**, Head of Brussels Office, ADR Nord-Est/Vice-chair of ERRIN
- **Pieter de Jong**, European representative Wetsus & WaterCampus Leeuwarden, expert in innovation ecosystems at ERRIN
- **Špela Stres**, Head of 'Innovation and Technology Transfer Centre' for the Jozef Stefan Institute (JSI)

*Reporter: **Sjoerd Louwaars**, Strategy consultant at SIRIS Academic*

## Session brief

Over the past few decades, an insufficient diffusion of innovation in companies, sectors and local areas has led to the full potential of breakthrough innovations being underexploited. As Europe faces a new wave of breakthrough innovations, the ability to diffuse them quickly will be key to achieving the objective of raising productivity and of more cohesive economic development. Moreover, despite progress in bridging the innovation divide, notably by some Member States catching up and in improvements in the number of R&I dimensions such as patents, the innovation performance gap among European Union regions remains high. This innovation gap is driven by stark differences in R&D investment levels, framework conditions for research and science, and the quality of the scientific production or innovation outputs. Many measures have been reinforced in the Multiannual financial framework (widening of Horizon Europe, support to policy reforms) and new ones have been adopted to address some of the identified shortcomings (under the Recovery and Resilience Facility, several Member States,

which have been lagging behind in R&I, have included structural reforms of their R&I systems in their Recovery and Resilience plans).

## Session summary

The aim of this session is to outline that the existing challenges, the key drivers and the solutions to ensure the implementation of an effective innovation agenda allow each region to find its place and benefit from it.

The European commission has put the green and digital transitions at the heart of its agenda, as it firmly believes that it will drive the economic growth in Europe. It is equally convinced that, in order to deliver its objectives and overcome periods of crisis, research and breakthrough innovations can play a pivotal role in the economic activities of all regions in Europe. Currently, 28% of the European population is still living in low-performing regions, and the investments in those regions are only of about 5% of the overall spending in R&D. This issue underlines the need to ensure the social aspects of innovation in an inclusive way. The establishment of an innovation policy aims to tackle a wide range of matters, such as how innovation ecosystems could play a part in the overall deeptech development, how to facilitate the actors of the innovation ecosystems to link together so as to secure the funding they need to scale-up, and how to help the region and the local-based innovation ecosystems to be part of the economic development through young and talented people.

Christophe Clergeau contended that the commitment at the European level to invest in R&I in order to diffuse breakthrough innovations remains one of the major areas of concern. Each region needs to define its goals and priorities in these fields to set up an intermediary level of mobilisation and innovation. Secondly, national level could be considered an obstacle to the innovation dynamic: the local scene and the development of its own strategies, as well as the definition of political and social consensus on innovation goals, are encouraged. Lastly, the interconnection of the regional ecosystems is to be highlighted, as it is a key element to ensure the success of Europe. As well, the global dynamic must be combined with the regional ones.

Bogdan Chelariu noted that the innovation divide is clearly perceivable in ERRIN. The 'do it yourself' ethic with regard to breakthrough innovation is highly encouraged, but there is no critical conversation about the innovation divide. The main challenge remains the use of funding to follow the European research agenda. Moreover, there is an unfair access to European innovation funding; thus they provide an in-house knowledge to offer recommendations on how to participate in these programs and decrease this innovation divide.

Another challenge is the attraction of talents in some of the poorest regions in Europe. Pieter de Jong uses the Netherlands as an example, where some regions

are the residence of developed companies specialised in the water technology sector. These demonstration sites are equipped to simultaneously do upscaling projects while doing fundamental research in order to develop technologies. They work with other European regions to share these skills, and they involve their regions and universities.

Other key challenges to bring forward innovation in the market are supporting talent, properly directing investments towards game changing innovation, organising access to infrastructure, and the professionalisation of innovation support management in Europe. The grantees need more technology transfers in order to be valorised. One specific idea that was mentioned by Špela Stres was to set up entrepreneurial knowledge transfer offices across Europe. Currently, there is a serious imbalance in terms of geography. Since knowledge transfer offices are one of the crucial elements in the innovation system, this should be taken into account.

In reaction to these observations, Anna Panagopoulou stresses that funding is not an issue in Europe, but rather the coordination between different actors and developing a strategic approach from the research to the market, not only at a European level but also at a regional and local level. The inclusion of citizens in these projects and the development of partnerships at the European level represent promising avenues for further exploration. The new innovation policy seeks to address these issues.

Funding goes to the same systems and organisations: there is little room for new actors to have access to funding, and the use of the latter is not disruptive enough. Regional and national governments could be more supported to become aware of the importance of funding schemes. Nevertheless, there is no self-regulatory power to ensure the success of this project on the long term.

Widening countries should be supported in order to promote reforms, create a more sustainable R&I system and be more competitive. The widening itself helps to address the issue of reforms. The European innovation agenda is an ambassador of inclusive innovation, but national authorities need to be willing to accept the projects. Also, new widening programs need to be open to the international level. The goal is to allow innovation in more widening regions, and create communicating vessels between lead cities and more rural regions.

The panellists provided, in their concluding observations, recommendations on how to improve the implementation of this agenda: the support of local and regional ecosystems, allow local, regional and national innovation levels to better work together, and prepare talents' skills by bringing them to local ecosystems in order to flourish.



## Four key messages/bullet points of the session

- ✓ The European commission works on an innovation agenda in order to bridge the innovation divide in the continent.
- ✓ Funding is not a problem, but rather the organisation of its attribution.
- ✓ The key drivers to counter this divide are the inclusive innovation European agenda, stimulation brain across Europe, making the infrastructure more inclusive, and critical introspection of regions about their own role in breakthrough innovation.
- ✓ The success factors for the implementation of these drivers are the inclusion of citizens in breakthrough innovation, the insurance of work in the long term, adherence to the local scene, and working on the region's autonomy.

## Relevant quotes

*'Green and digital transition remain a priority.'* (Anna Panagopoulou)

*'We need more than platforms and networks between regional ecosystems to build projects together.'* (Christophe Clergeau)

*'Our priority is to attract and retain talent from around the world.'* (Pieter de Jong)

*'We need to organise more events like Wire in eastern European countries, like Romania, and be critical about the status quo.'* (Bogdan Chelariu)

*'Talent needs to be encouraged, and support management must be professionalised in order to counter the imbalance between different European regions.'* (Špela Stres)

## Closing Plenary

Thursday, 12th May, 2022; 5:30-6:00 pm

- **Bruno Bonnell**, General Secretary for Investment in charge of France 2030
- **Anna Panagopoulou**, Director for European Research Area & Innovation, Directorate General Research & Innovation, European Commission
- **Sylvie Retailleau**, President of Université Paris-Saclay

This session concluded the discussion and presentation portion of the conference. Closing Plenary speakers were impressed with the quality and the dynamic discussions and presentations.

Anna Panagopoulou observed that this was the first physical event of WIRE in almost two years, which lends itself to the sharing of ideas and networking of actors from different regions. Networks are needed to breach the innovation gap, and to scale up and promote new innovation for the benefit of Europe. Of note, the European Commission currently is drafting the 'New European Innovation Agenda' and WIRE 2022 conference take-aways will be taken into consideration.

Bruno Bonnell remarked that we do not invest in innovation just to make incremental improvements, and we may not even know what it will be used for, but rather we invest for future potential breakthrough innovations. We have to accept that there are things that we do not know, and that investing in research, innovation, and 'crazy ideas' will move us forward. State involvement is essential. Innovation is not to be confused with invention, which is something to offer the market, but rather innovation is a response to a societal question. Long-term thinking is required.

Sylvie Retailleau closed the conference. Conference discussion over the past two days covered many topics, including: specificities of breakthrough innovation with regards to classical innovation; key aspects for the dissemination of these innovations (known and unknown); innovations that challenge the markets in which they operate and how they change uses; needs of more funding opportunities for ecosystems, and industrial and intellectual property protection; training of talent; and social acceptance of innovations.

There is no lack of ideas and skills in Europe. Conference attendees have a shared vision for seeing Europe succeed; success depends on our collective work.

She thanked for participants for being realistic and but also optimistic.