

# *Bridging the Innovation Gap*

## Panel recommendations on the EIC Pathfinder

Summary of improvement areas and recommendations identified in the panel session "Bridging the Innovation Gap" in the conference Innovative Enterprise Week, Bucharest, 19 June 2019<sup>1</sup>. Final version, 24 June 2019.

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The session addressed how to transform scientific results into concrete innovation opportunities. A panel debated on how the future European Innovation Council (EIC) and the EIC Pathfinder in particular can best facilitate this transformation and bridge to the other EIC component, the Accelerator.

The session started with short presentations of three concrete FET Programme experiences, showing different ways in which FET disruptive and interdisciplinary research can be the basis for radical innovation. These were presented by:

- **Orestis Georgiou**, CEO Ultrahaptics Ltd. (UK)
- **Paul Lukowitz**, German Research Centre for Artificial Intelligence (DE)
- **Silvestro Micera**, EPFL (CH) and SSSA (IT)

The second part was a panel discussion with the following additional panellists:

- **Mina Teicher**, Director Emmy Noether Institute for Mathematics, Bar-Ilan University, former FETAG co-chair
- **Lars Frolund**, Research Director, Massachusetts Institute of Technology (USA)
- **Isabelle Rivat**, CEA-Strategic Analysis Division, and EARTO representative (FR)

### Recommendations:

1. Maintain the strengths of FET in the transition to the EIC
2. Safeguard the perception and brand of Pathfinder
3. Creating European start-ups with a global reach that remains with a major part of their footprint in Europe
4. Strengthen the possibilities to go to prototypes, demonstrators and pilots in collaboration with RTOs
5. Make sure that flexibility is a key feature
6. Emphasize the creation of both economic value and societal value
7. Consider carefully the role and competence profile of Programme Managers

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<sup>1</sup> The session was one of two panels in 'EIC Pathfinder: From breakthrough technologies to disruptive innovations - IMAGINE THE TECHNOLOGIES OF THE FUTURE', co-organised in the context of the [Innovative Enterprise Week](#) by the European Commission's Directorate-General for Communications Networks, Content and Technology, and the Directorate-General for Research and Innovation. It was the first day of a 3-day event on the European Innovation Council (19, 20 & 21 June 2019). It has been supported by the Romanian Presidency of the EU.

## 1. Maintain the strengths of FET in the transition to the EIC

Make sure that the high-risk, high-reward features of FET remain as it is transferred to the EIC context. Like FET did previously, the Pathfinder should challenge the current thinking of researchers, be interdisciplinary, be flexible and proactive. It should make it possible to test and apply scientific results in the real world from the early stages of the research on, and learn from it.

The Pathfinder and Accelerator should in combination provide funding that is not available otherwise, encourage industry-academy collaboration, accelerate the innovative capacity of start-up companies and cultivate ecosystems of excellence and openness.

## 2. Safeguard the perception and brand of Pathfinder

A particularly sensitive part of the transition from FET to the EIC Pilot is the inherent perceptions and brand values of FET, which should be safeguarded in the transition. The reasons are to keep the attraction with the current community and not to lose trust and relations that has been built up gradually throughout 3 decades of FET. If the perception and brand is transitioned successfully, the EIC Pathfinder and its link to the EIC Accelerator will ultimately be perceived as major reasons for European top talents to remain in Europe, and for top talents from other continents to come to Europe.

Even if the Pathfinder *in its documentation* is as open as it was before, there is a risk that it *is perceived* to be less open, less bottom-up, less supportive of curiosity driven research etc. Further, there is a risk that it is perceived to be restricted by the EIC context and by the link to the EIC Accelerator. It is therefore important to clearly bring forward the heritage of FET in all written documentation to show that it is an integral, clear and explicit aspect of the EIC Pathfinder. It is crucial to systematically and in the long-term perspective communicate these aspects of the EIC Pathfinder.

The Pathfinder should be perceived as “cool, open and flexible”, with rich opportunities for ground-breaking research and innovation projects to go to the next funding scheme, through the EIC Accelerator or otherwise.

The importance of safeguarding the FET brand and perception in the transition can not be underestimated. It is perhaps the most important issue in the transition and, thereto, it is one of the most difficult ones to address properly. Moreover, it must be dealt with intensively and consequently – across all communication, and it must be dealt with over a long time.

One success factor in safeguarding the perception and brand is to systematically claim, capture and display the value created by efforts starting in the EIC Pathfinder– to society, industry and to the research community.

## 3. Creating European start-ups with a global reach that remains with a major part of their footprint in Europe

An important feature of the Pathfinder and Accelerator is that they contribute to the creation of European start-ups with a global reach that remains with a major part of their footprint in Europe.

This means that the Accelerator should stimulate co-investment on global capital markets but that they should try to avoid too early change of control in ownership to other continents. This is to ensure that the start-ups created remain with a major part of their footprint in Europe, of course to the appropriate extent according to the business rationale of the start-up.

A contributing factor is to enable European capital investors as well as industrial companies to invest in start-ups to a larger extent. Among other things this is about creating pan-European ecosystems of investors and investor networks. Another contributing factor is to strengthen the mechanisms that link the future needs of European industry to the shaping of Pathfinder and Accelerator projects.

It is desirable to stimulate participation of investors who can add other qualities and resources than mere investment capital, e.g. strategic and operational advice, buyer-seller relations, lab infrastructure.

Regarding “deeptech” companies, they are often based on slow-maturing intellectual assets. For these it often takes long time to conduct the research that gradually develops a portfolio of intellectual assets that can create substantial economical and societal value. If venture capitalists come in too early there is a risk of “premature scaling” and that the perspectives on commercialization get too shortsighted. Therefore, it is important to offer opportunities that can support the maturation and development of intellectual assets, e.g. funding that covers costs of withholding IPR, over long time. Deep tech innovation requires time, and the programme should take this into account, by design.

#### 4. Strengthen the possibilities to go to prototypes, demonstrators and pilots in collaboration with RTOs

Consider to further stimulate the participation of RTOs (typically at TRLs 4-6) to go to prototypes, demonstrators and pilots. RTOs have other resources than industrial companies and SMEs and can be suitable complementary actors in many Pathfinder projects, especially for the transition to the EIC Accelerator or others parts of Horizon Europe.

#### 5. Make sure that flexibility is a key feature

Make sure that the EIC Pathfinder and Accelerator are flexible, “multi-port” and “open” framework, to encompass different types of scientific breakthroughs, technological contributions and innovations under the same umbrella. This regards many upstream activities and resources, not the least those parts of the consortia agreement that regulate IPR that might need to be reviewed. It must for example consider the disruptiveness between the research and innovation phases, e.g., characterized by big differences in the projects’ stakeholder set-up.

An equally important aspect of flexibility is at the project level since projects are stretched out in time, open-ended and uncertain. Flexibility and adaptability on EC side is required to make most out of each project under the Pathfinder and Accelerator scheme.

In addition, there should be built-in flexibility in the EIC Pathfinder in the sense that results cannot only be brought forward by the Accelerator, but also by other EIC-external programs and schemes.

## 6. Emphasize the creation of both economic value and societal value

Emphasize more strongly the Pathfinder's possibilities to create economic *as well as societal value*, by aligning scientific results, disruptive technologies, innovations and societal impact.

The mantra "creating good business *and* good for society", will grow in significance because of the increasing threats of climate change, reduction of bio-diversity and others. The Fridays for Future campaign manifests this and is carried forward broadly by European youth, who profoundly affect European values and will soon be the researchers, entrepreneurs and innovators of Europe.

## 7. Consider carefully the role and competence profile of Programme Managers

The role of Programme Managers should be taken on by researchers who understand the world of research in general and that have entrepreneurial and innovation experiences. Additionally, they should have a solid experience in a broad scientific area and should be able to shape projects with vision and flexibility.

The Programme Manager needs to work with a higher accountability than a DARPA officer but with the same (or close to the same) freedom, which is necessary to attract candidates with the right qualities. Their perspectives, experiences and networks should be different from but adjacent to the project team in terms of science, technology, innovation and societal impact. The Programme Directors at [Arpa-E](#) is an inspirational comparison.

The Programme Managers should support the project in the disruptive transition from the research phase to the innovation phase, and for instance be able to assist the change of the projects' stakeholder set-up in each phase. The Programme Managers should mentor and guide researchers in business development and assist in finding ways to motivate Ph.D. students to think about start-up creation as a career option. The Programme Manager's business and development skills can help to bridge the gap between research and innovation.

It might turn out to be challenging to find Programme Managers that have all the right qualities and are skilled on both research and innovation side. The implementation should reflect this and contain close monitoring and following-up to see if the role really is successful and how it best can be supported or attuned.

One aspect of the Programme Manager role is that it is intended to nurture others success whilst him- or herself remains in the background. This aspect should be clearly emphasized at an early stage to avoid misdirected expectations with candidates.