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Innovation manifesto looks to address causes of EU's heavy reliance on technology from beyond its borders

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Call for ideas on European innovation area makes tech sovereignty a key priority. Current dependence on high tech imports is both an economic loss and a potential security threat, the manifesto says

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Research Commissioner, Mariya Gabriel. Photo: European Union

An innovation manifesto outlining eight areas on which the EU should focus in the creation of the proposed single European innovation area, puts tech sovereignty at the top of the list of priorities.

"Strengthening technology autonomy is essential" to Europe's "security, defence and economic stability", according to the manifesto (https://www.eiamanifesto.eu/), presented to research commissioner Mariya Gabriel today.

The intention of the manifesto is to provide a framework for further debate on the form EU innovation policy should take. "This manifesto that we are handing in today [...] is not a composite paper, [or] a complete vision. It's instead a dynamic and living document, an open call for ideas," said Maria da Graça Carvalho MEP, presenting the document to Gabriel.

Carvalho was speaking on behalf of Knowledge4Innovation (K4I), a think tank bringing together MEPs, universities, and industry that has been collecting ideas on how to boost innovation in the EU for 12 long years. Now, freshly energised by the need to emphasise the central role research and innovation will play in rebuilding the European economy, over the next three months K4I intends to draw up a list of actions based on the eight focus areas. It will then hand over a draft action plan to Gabriel in September.

In terms of tech sovereignty, Europe needs to draw on the strength of its broad research institutions and nurture its growing digital infrastructure, while ensuring that core democratic values still apply in the new green and digital age. The development of a cohesive ecosystem that "fosters innovative excellence" is the way to achieve this, the K4I manifesto says.

K4I's is not the first innovation action plan to land on Gabriel's desk since the beginning of the year. At the Commissioner's request, in April, leading European CEOs drew up (https://sciencebusiness.net/technology-strategy-board/news/leading-ceos-call-eu100b-technology-sovereignty-fund) a similar plan. Start-up companies have also contributed their ideas.

The request for ideas and wish lists represents a change from the Commission's usual approach of presenting a policy outline and launching an online consultation. This time around, the Commissioner is collecting the thoughts of groups around Europe in a bottom-up fashion, in a bid to improve the European innovation ecosystem.

"My goal is to establish a policy that fosters an inclusive, pro-innovation environment," Gabriel said at the Knowledge4Innovation event. There will be a focus on increasing innovation cohesion among regions and among member states, and empowering more women to take the lead as tech investors and entrepreneurs, she said.

No one thinks this will be easy. Linking EU innovation ecosystems is more complex and less linear than creating a single market for research, a project over which the EU has laboured for 20 years. It is also an area where there is great disparity across the EU, with the gap in innovation performance remaining larger than the gap for most other basic economic indicators, such as GDP per capita, employment, and productivity.

"Innovation is related to a lot of other areas, from the financial system to the labour market, to the judicial system," said Carvalho. "We need all these systems working well."

Case study: synthetic cells

As one example of an emerging technology in need of better EU innovation policy, Europe currently has a lead in basic research in synthetic biology. This specialism will make it possible manufacture polymers, proteins and other products in cells, in a far more predictable way than cell lines that are currently used in biomanufacturing.

With the right tools and investments, in a few years, Europe could be producing materials that are 100% reusable, or which self-repair when damaged.

But the field is rapidly becoming more and more competitive, with the US and China boosting investment in this area. In Europe, scientists want more money for synthetic biology in Horizon Europe and are awaiting the final work programmes, which will detail how much funding the Commission will allocate to the field in the next few years.

"It is clear that we are now at a tipping point," said Tim van der Hagen, rector of TU Delft, outlining how finely poised things are. "If sufficiently funded, progress in this area in the coming five to twenty years will position Europe as the leader in this scientific and technological revolution. But it needs now to [be] up scaled to a European level."

Competing on a global stage, it is not possible for one country or institute to take the lead. Innovation and scale up at EU level will be key, and this is where a revamped EU policy for innovation is crucial.

Collecting ideas

The goal of the new innovation policy is to reduce bureaucracy, improve conditions for innovators, reduce barriers to translation and commercialisation, and get research results smoothly flowing from labs to market.

For now, K4I has settled on eight key areas around which to base its action plan. In addition to tech sovereignty, it cites the green transition, education and entrepreneurship, fostering innovation cohesion, supporting what it refers to as Europe's "deep tech opportunity," in areas including artificial intelligence, blockchain, smart cities, robotics and quantum technology.

K4I also wants the innovation policy to increase the number of women technology investors, provide more funding for venture capital firms led by women and to invest more in women-led start ups and female entrepreneurs.

In addition, innovation policy should ensure the regulatory framework encourages cooperation and stimulates the innovative potential of new technologies.

Finally, K4I says there should be moves to improve financing for innovation and emerging technologies, with the private sector encouraged to pull its weight through matched public private funding schemes.

To pull together all these strands, there will be two more seminars this month, following up on today's launch of the manifesto. One will look at employing the EU pandemic recovery money to boost innovation. The other will discuss how to close the innovation gap across Europe.

The focus will be on exploiting synergies between different EU and national programmes. The EU research agenda has been set for the next seven years in Horizon Europe, and any new policy will have to build on its foundations.

But a strong research base is only the first step. "There is no point [in having] a strong research system, a strong higher education system, if the results of these two pillars do not flow to the economy and the society," said Carvalho.

Tech sovereignty | R&D policy | synthetic cells