To achieve visible impacts Horizon Europe must connect to local innovation dynamics

The European Commission aims to use the new Framework Programme for research and innovation — Horizon Europe — to demonstrate to a greater extent than previously that public investments in research and innovation result in real benefits for society. Drawing on research from the Rathenau Instituut, Laurens Hessels, Sue-Yen Tjong Tjin Tai, Julia Jansen and Jasper Deuten, argue that this ambition can only be achieved if the Commission can link European programmes to the interests of localities in ways that also deliver long term transformational changes.

The current COVID-19 crisis daily illustrates the societal impact of scientific knowledge, as politicians 'follow the science' and attempt to base their policies to control the pandemic on (mainly medical) research. This evidence-informed decision-making highlights unambiguously to the public why it is good to support research and it is these kinds of impacts and public support that the new European Commission is looking to achieve in its Framework Programme for research and innovation – Horizon Europe. To this end, starting in 2021 four major changes are being introduced that have significant academic and political implications.

- 1. The Commission will use Horizon Europe to realise its six main policy priorities, such as 'a European Green Deal', 'a Europe fit for the digital age', and 'a stronger Europe in the world'.
- 2. The Commission has also identified <u>five mission areas</u>, including cancer, climate adaptation, and soil health & food. These missions are designed to coordinate research and innovation efforts towards defined social benefits, with each mission aiming to achieve an inspirational and measurable goal for European citizens within ten years.
- 3. The establishment of the <u>European Innovation Council (EIC)</u>, meant to enhance the competitiveness and technological sovereignty of Europe by supporting high-risk, high-impact ideas, turning science into new business and accelerating the scale-up of 'game-changing' innovators.
- 4. The Commission has announced a number of working methods and practical arrangements in order to increase research impact as part of the <u>'implementation strategy'</u> of Horizon Europe.

MISSION AREAS

Soil health and food

Cancer

#HorizonEU





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For example, the work programmes will provide a clearer specification of expected impacts. The impact criterion that will be used in the evaluation of proposals, and the way applicants are guided by the proposal template, will refer to these targeted impacts. In addition, applicants will be required to specify how their proposals contribute to targeted impacts. In specific parts of Horizon Europe's work programmes, such as the missions and the EIC, the Commission will design the evaluation process in such a way that the proposal selection leads to a coherent portfolio of projects. The Commission will also set up two online platforms (Horizon Results Platform and Horizon Impact Award and Innovation Radar) that are to stimulate researchers to continue the reporting on dissemination and exploitation activities beyond the life of the project itself.

Realising these ambitions requires a significant budget, which is yet to be agreed. Even before COVID-19, negotiations between the European Commission, Member States, and European Parliament about the multi-annual financial framework 2021-2027 were tough and the Horizon Europe budget (approximately €94 billion) has become an object of struggle. On the one hand, the relatively prosperous 'old' EU Member States hesitate to pay more to compensate for the departure of the UK. On the other hand, the newer Member States ('EU13') do not want to put a cap on the overall budget because this would rapidly lead to cuts to the Cohesion Funds used to reduce economic and social disparities within the EU.

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Researchers and policy analysts, such as ourselves at the Rathenau Instituut, are closely following these developments, as it is vital for national and regional governments to be attuned to European dynamics in order to develop their own research and innovation polices. Not only in quantitative terms, since Europe makes a significant contribution to the funding that is available for research and innovation within Member States. But, also in qualitative terms, because European-wide collaboration networks have become increasingly important for researchers and industry, and EU policies on open science and responsible research and innovation have gained momentum. Notably, our analysis of these ongoing changes has pointed to three particular tensions inherent to the Commission's plans for greater research impact.

The first tension is that Member States have different views on what the main purpose of European research and innovation policy is. Achieving strategic objectives with the aid of research and innovation requires not only major investment, but also support for a shared vision of the added value of European cooperation. In preparations for Horizon Europe, Member States disagreed about the project selection criteria to be used: excellence and impact on the one hand, or geographic distribution ('widening participation') on the other? This illustrates the lack of a shared vision on the role and added value of the EU in funding research and innovation.



A second tension is between using Horizon Europe and the European Research Area (ERA) to demonstrate concrete results to EU citizens in the shorter term, and using them to develop longer-term transitions in society towards sustainability. Recent advice on the future of the ERA proposes to make public awareness of research and innovation successes a new ERA priority. Having tangible examples of such successes (referred to as 'ERA lighthouses') could help EU citizens to better understand the significance of research for the economy and society. Increasing public and political awareness of the potential impact of research also seems an important motivation for the mission-oriented approach of Horizon Europe. It would be a missed opportunity, however, if the mission-oriented approach will be designed as a way to deliver quick results, rather than as a means to contribute to transformative change in the economy and society in the longer term. To seize this opportunity it would be helpful to use the principles of responsible research and innovation (RRI) that imply that societal actors (researchers, citizens, policy makers, business, third sector organisations, etc.) work together during the whole research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of society.

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Finally there is a lack of alignment between research and innovation policies at the European, national, regional and local levels. Societal impact of European research and innovation can only be achieved if projects and innovations are clearly embedded within practices at the level of Member States. National regulations and protocols, for instance, affect if and how innovations can become a commercial and societal success. In many application domains, such as Health and Education, the EU has only supporting competences, this has been demonstrated during the COVID-19 crisis as the EU has struggled to define more than a coordinating role in fighting the pandemic.

The European Commission has set out an ambitious agenda for generating impact with Horizon Europe and the European Research Area. However, these ambitions can only be realised if the Commission succeeds in linking European programmes with local innovation dynamics within Member States. This requires policy coordination across European, national, regional and local levels, based on a shared vision on European added value and critically, engagement from national and regional government in decision-making in order for impacts from Horizon Europe to be recognised and legitimated. It also requires the European Commission to resolve the tension between using European research and innovation funding to demonstrate concrete results to EU citizens in the shorter term, and the more complex and harder to evidence use of these funds to support longer-term systemic transitions in society.

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