

Position Paper Horizon Europe and Beyond

Update 2024

By Universities of the Netherlands (UNL) & Netherlands Federation of University Medical Centres (NFU) – December 2024

Introduction

Research and innovation (R&I) are the backbone of Europe's global competitiveness and are essential for achieving the EU's long-term goals in addressing complex societal challenges. Horizon Europe has showcased the EU's strong commitment to supporting innovative research across its borders. Dutch universities, University Medical Centres (UMCs), and other institutes strongly support and actively engage in European research programmes, fostering international collaboration and sharing knowledge to build a peaceful, united, and prosperous Europe. In the Netherlands, the R&I Framework Programmes have been instrumental in funding ground-breaking research in fields such as health, climate, and digitalisation.

Although significant progress has already been made in the past decades, there is still room to further optimise the current and future Framework Programmes and align strategic priorities to tackle the great challenges of our time. The goal should not only be to address today's global challenges, but also to anticipate future ones. A strong R&I programme must invest in immediate solutions while also boosting long-term adaptive and innovative capacity across a broad spectrum of disciplines and interdisciplinary fields.

In February 2023, we presented five key recommendations for the future, along with suggestions to enhance the current programme. With this 2024 update, we highlight several points that we believe deserve special attention in FP10. We recommend that the structure of FP10 be shaped in continuity with its predecessors Horizon 2020 and Horizon Europe. The current three-pillar model has proven to be an effective framework for organizing research and innovation funding. We encourage further development of instruments that have shown their impact in advancing Europe's scientific excellence and delivering tangible outcomes. These points are further elaborated in the following sections.

1. Invest in research and innovation as a strong strategic priority for Europe as a whole

Horizon Europe, more than any of its predecessors, embodies the ambition to mobilise research and innovation partners to attain geopolitical, economic and societal goals. According to the European Commission, "it tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts the EU's competitiveness and growth".¹ If the EU wants to deliver on these goals and its wider ambitions, research and innovation need to be at the forefront of its geopolitical strategy in all policy areas. This message has recently been reiterated in the reports of Enrico Letta and Mario Draghi and in the evaluation of the Horizon programme by the Heitor group. Climate policy cannot be executed without investing in environmental research, the rule of law cannot be properly valued and safeguarded without legal scholars or historians, and new innovative solutions are indispensable in policies as diverse as agriculture, development aid and protecting our cyberspace. We call on both the EU and its member states to give R&I top priority. R&I should be fully embedded in policies across the board and these policies must deploy their legal and regulatory tools to create favourable conditions for R&I to flourish.

Making R&I a stronger priority requires a more ambitious, stable and reliable R&I budget. Around us, global competitors are prioritising R&I to retain or increase competitiveness, strategic autonomy and technological superiority. China has now surpassed the EU in their R&I expenditure relative to its GDP.² With the CHIPS and Science Act, the United States passed legislation that directs \$170 billion to scientific research, innovation and space exploration, thereby recognising the essential role scientific advancement plays in maintaining a global leadership role and solving global challenges. Europe cannot stay behind. We call on both the Commission and

¹ Source: https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

² Source: <https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?locations=EU-US-CN>

national governments to commit to the necessary investments. Concretely, national governments should work towards the Lisbon objective, to boost combined R&I spending to 3% (public sector and private sector). The EU on their part should consider structurally strengthening the seven-year budget for the framework programme by at least doubling the past budget to 200 billion.³ Additionally, the annual uncertainty on available budget and its risk of being re-allocated to other programmes during the course of the programme period are not conducive in reaching the EU's policy goals. The budget for FP10 should be ringfenced and protected.

Update 2024: Facilitate International Collaboration, Knowledge Security, and Dual-use Research

Striving for greater strategic autonomy and more competitiveness should not lead to an EU that is too inward looking. International collaboration is necessary to solve global challenges and to strengthen the EU's position in the world. FP10 should support this and continue association of strong R&I countries that share our values, such as the UK, Canada, New Zealand, Switzerland, and others. Furthermore, notably Pillar 2 could be used to ensure that science diplomacy is recognized as an instrument of soft power to stimulate, influence, and help solve global challenges. To avoid undesirable outcomes, clear guidelines on structuring international collaborations and evaluating these collaborations are necessary, especially for countries where fundamental freedoms are at risk. Interim evaluations are crucial to maintain accountability, safeguarding both the core values and the research, as well as protecting the people involved. This should not lead to additional administrative burden.

Dual-use

Like the Heitor group, we are not in favour of creating a separate instrument for dual-use within FP10. However, we do believe FP10 should remain focused on civil research and applications. To be able to do this, we need a clearer definition of what constitutes dual-use. A hybrid approach might be most effective. The EU could adopt a broad, pan-European definition that sets out common principles and guidelines for dual-use, while allowing individual member states some flexibility to adapt this definition based on their specific geopolitical needs. This would ensure coherence at the EU level while recognizing the legitimate security concerns and priorities of individual member states. We stress that military-focused research should be part of a separate programme and that this should not come at the expense of other research budgets.

2. Maintain excellence and impact as a key principle throughout the whole spectrum of research and innovation

Horizon Europe should remain dedicated to supporting excellent and impactful science as a key principle and this must be continued in FP10. Excellence has rightly been securely anchored in the Horizon programme and has ensured that funded research rivalled the state-of-the-art in its field. Programmes such as the European Research Council (ERC) and the Marie-Sklodowska-Curie Actions should be strengthened further to ensure that the EU generates enough frontier knowledge. Though it is essential that generated knowledge finds a way to European citizens, funding the entire spectrum – from fundamental research to applied innovation, and from large to small projects – in a sophisticated way, remains essential and is one of the core strengths of Horizon Europe. This could be further improved by allowing fundamental research to play a larger role in Horizon Europe's Pillar 2. Currently, Pillar 2 calls are often too broad, too industry-oriented or aiming for very high impact levels.

Our Dutch universities and university medical centres are more than willing to play an important role in maintaining the balance between fundamental and applied research: they already deliver a solid knowledge base for fundamental and innovation-oriented programmes and invest in ecosystems that boost innovation and stimulate entrepreneurship. The excellent research they deliver through programmes like Horizon Europe is inextricably linked to education and teaching, providing a new generation of European researchers and students with the most recent knowledge and skills.

Update 2024: Reform Innovation Strategy and Promote Synergy Across Pillars

In order to support the transition from knowledge and technology to implementation, synergies between the three Pillars and other EU-programmes should be improved. Within FP10 we need to establish a funding framework that can maximize the potential follow-up or exploitation of research results while avoiding

³ Source: <https://op.europa.eu/en/publication-detail/-/publication/ffbe0115-6cfc-11e7-b2f2-01aa75ed71a1/language-en>

fragmentation. Cross-linking funding instruments could facilitate knowledge exchange, talent development and tackling of scientific and societal challenges. Currently, there is no direct bridge between Pillar 2 and the EIC. This is a missed opportunity, as many promising results and innovations from Pillar 2 projects could benefit from further development through EIC support. Additionally, strengthening the links between these pillars and expanding the EIC's focus to include social innovation would ensure broader support for diverse innovations.

To facilitate this, there needs to be a clear and focused vision for Pillar 3. In its current set-up, programmes lack a cohesive strategy. For example, there are significant differences between various EIT initiatives and in general the programme is seen as incredibly complex and administratively burdensome. The added value of the EIT in promoting innovation and valorisation should therefore be carefully assessed. A more unified approach is needed to address the discrepancies in such programmes. A potential solution could be merging EIT, EIC, and ERC Proof of Concept programmes into a single structure – a one-stop-shop – that supports both research and innovation and that is more clearly linked with the other pillars.

Create More Synergy Between R&I and Education

Education is essential to ensure the next generation of scientist is trained so they can translate research into innovation and positive impact for society. Therefore, FP10 should be better aligned with education, providing a new generation of European researchers and students with the most recent knowledge and skills. At research intensive universities, such as those in the Netherlands, this can be done through 'research based education' which integrates cutting-edge research into educational curricula. At the same time, new research insights generated by the Framework Programme should be integrated into teaching to boost quality of education. The European University Alliances provide a good platform for this. Though it must be stressed that bottom-up research outside of alliances must always remain possible, if not leading.

3. Unlock Europe's rich and diverse potential

The challenges that Europe is facing are multifaceted, highly complex and require cooperation between disciplines. Future Framework Programmes should therefore foster inter- and multidisciplinary approaches more than ever before. The signatories believe that excellent researchers from all disciplines should participate in Horizon Europe calls. The programme has already made significant progress in including Social Sciences and Humanities (SSH) in its call topics, but they have not always been included in practice. This type of research should no longer be treated as an add-on, as SSH disciplines are essential to promote multi/interdisciplinarity and to encourage societal uptake of new technologies and scientific results. More calls could start from an SSH perspective so that adoption of technologies or solutions is not only considered at the end of a project. To ensure all the facets of today's societal challenges are tackled adequately, we encourage the Commission to continue the integration of the SSH-domain in Horizon Europe and future FP10 call topics.

The signatories believe all member states should actively participate in the European Research Area agenda and therefore support widening participation and spreading excellence activities. However, genuine and sustainable change can only be achieved by concurrent investments and reforms at the national level.⁴ It is crucial that all member states simultaneously invest in their national R&I ecosystems to ensure widening measures have a lasting impact. Moreover, the potential of all member states can only be fully unlocked through synergies between Horizon Europe and regional, national or other EU policies and programmes. We encourage the EU to further align the Framework Programme for Research and Innovation with its Structural and Investment Funds, Erasmus Programme, and national funding programme. Alignment should be visible in policy priorities as well as funding structures and implementation modalities.⁵

4. Prioritise well-functioning instruments and completing the European Research Area

The current framework programme funds a multitude of scientific endeavours, some more successful than others. Instruments such as the European Research Council (ERC) have more than proven their worth, allowing researchers to pursue new and innovative ideas across the continent. The EU missions have so far not been as successful. They were set up to bring concrete solutions to our biggest challenges, but realising those

⁴ Source: https://www.eca.europa.eu/Lists/ECADocuments/SR22_15/SR_Horizon_2020_Widening_EN.pdf

⁵ See also: <https://eua.eu/resources/publications/918:building-synergies-between-education,-research-and-innovation-by-aligning-the-eu-funding-programmes.html>

ambitions with the necessary resources scattered across wide-ranging projects and themes will be difficult. Research and innovation need a long time to truly showcase all their benefits for society and deepen their impact. We therefore advise the Commission to adhere to the current 3-pillar structure and to prioritise dedicating resources to strengthening well-functioning instruments over designing new ones (i.e. continuing current missions but not adding new ones).

In choosing priority areas, the Commission should make sure Horizon Europe and its successor framework programmes are deployed as tools to complete the European Research Area: a borderless internal market for research, innovation and technology. Instruments should contribute to the ERA Policy Agenda in areas such as Open Science, Reforming Research Assessment, promoting gender equality and protecting academic freedom.

5. Streamline and simplify process and procedures

The enormous challenges Europe is facing require policies and programmes that are transparent, efficient and effective. Applying for Horizon Europe funding should be an easy, clear and smooth process. Not a single brilliant proposal should be wasted because the applicant could not navigate the application procedure. With each framework programme, the Commission takes strides in streamlining procedures, but due to changes and additions, the job of simplification is never complete. Especially with regard to the European partnerships, there is still a lot of uncertainty surrounding each partnership's differing regulations. The Commission should therefore take action by establishing a clear and uniform governance. Efforts towards simplification, such as the introduction of lump sums, should be properly evaluated for practicality and unforeseen or unwanted side effects. In general, the conditions for the application should be as comprehensive as possible, so researchers know how they will be evaluated and are not deterred by broad or complex criteria. We call on the Commission to include stakeholders not only on the policy level, but also on implementation level by directly contacting the participants, and by introducing the user panel, allowing open feedback to improve the programme as well as the synergies with other relevant programmes.

In the coming months of evaluation, reflection, and looking ahead, Dutch universities and university medical centres warmly invite the Commission to engage in a discussion on our five recommendations and the 2024 updates, to make sure the current and future Framework Programmes' impact will continue to grow.

Update 2024: Empower Inclusive and Transparent Partnerships

The idea behind partnerships is valuable, but is now much too complex. Currently there are different rules for different partnerships, but also between countries and financing agencies. This leads to unnecessary administrative burden. On top of that, calls are not open to all relevant partners. This makes it very difficult for industrial partners to participate and it is often unclear what the objectives are concerning involvement of countries outside of the EU. More alignment, transparency, and inclusivity is thus needed, and no new partnerships should be added before this is reached. Partnerships should be developed in co-creation between Member States, associated countries, and stakeholders.