

Looking at the Horizon and Beyond

*Neth-ER position paper:
evaluation of Horizon 2020 and Horizon Europe*

Neth-ER, the Brussels-based association of eleven Dutch organisations working in the field of research, innovation and education, wishes to express its enthusiasm towards the past and present European framework programmes for research & innovation. Four key issues demand attention for the future:

- 1. A robust budget**
- 2. Excellence & impact**
- 3. International cooperation**
- 4. Programme simplification**

Neth-ER looks forward to helping shape the future of the programme together with European institutions, national governments, and stakeholder organisations.

IN-DEPTH LOOK

European added value through collaboration & competition in the framework programme

Since 1984, the framework programmes for research have become a flagship of the European Union, showing what can be achieved through European cooperation. Over time, European research grants have grown into an internationally recognised quality label for excellent and impactful R&I projects. The programme's European added value is provided by its collaborative and competitive elements.

The collaborative element is showcased through the inherent transnational character of multi-beneficiary grants in Horizon, which connect researchers all across the continent and beyond to jointly look at real-world problems. By bringing research networks in contact with each other the programme offers a truly European perspective.

The same is true for the competitive element generated by Horizon. Competition at the European level ensures only the most capable researchers and innovators are entrusted with European funds to develop ground-breaking ideas. This is especially the case with competition for mono-beneficiary grants, for instance through the ERC.

“The collaborative research made possible by Horizon Europe does not only strengthen our excellent knowledge base, our impact towards solving societal challenges, but also creates European-wide networks of stakeholders and ecosystems.”

Erik Drop
Director at the
Netherlands
Organisation for Applied
Scientific Research
(TNO)

“European framework programmes are important instruments for UMCs to contribute collectively to address health challenges. Budget stability until the end of Horizon Europe is key to expand knowledge leading to solutions.”

Annemie Schols
Board member of the
Netherlands Federation
of University Medical
Centres (NFU)

I. European R&I demands a significantly higher, more stable budget to advance the EU's scientific, political, economic, and societal goals

Recommendations

- Maintain the collaborative and competitive elements of the framework programme to secure its European added value
- Double the budget to at least 200 billion euros in the next MFF to ensure Europe's global competitiveness
- Increase budget security through ringfencing to make the programme more stable and predictable

The framework programme pushes the frontier of knowledge both by funding collaborative projects on global challenges at a European scale and by stimulating competition among the best and brightest researchers and innovators across Europe. The programme clearly complements national funding for research and innovation (R&I).

By strengthening the EU's scientific and technological bases, the programme safeguards the European competitive edge in research and innovation¹. This makes Horizon indispensable to advancing the EU's political, economic and societal goals. Most notably, the programme accelerates both the green and digital transition, ensures broad economic and social welfare across Europe and advances European open strategic autonomy. It plays an instrumental role in boosting the EU's competitiveness on the global stage, which is something that should be cherished.

The Lamy report called in 2017 for doubling the Horizon Europe budget compared to its predecessor². A significantly higher budget remains of the utmost important

to enable the framework programme to effectively attain its objectives in the long term. In the next Multi-Annual Financial Framework (MFF), a modern, forward-looking multi-annual R&I budget of at least 200 billion euros is therefore needed. The upcoming midterm review of the current MFF should address a higher budget for Horizon in the shorter term. A serious increase is vital to remain competitive vis-à-vis other regions in the world that continue to increase their R&I spending³. Although the initial success rates of Horizon Europe have improved compared to Horizon 2020, they still convincingly demonstrate Europe's enormous appetite for more ground-breaking research.

Alongside an increase in size, the stability of the budget should be secured through ringfencing, to make sure researchers and innovators can work on long-term programming of their research roadmaps. The recent trend towards siphoning off funds from Horizon to finance new political priorities, such as the Bauhaus, seriously harms the stability and predictability of the programme. When new ambitions and expectations are added to the programme, commensurate new funds should be too.

¹ As exemplified by the numerous Nobel Prize laureates the programme has produced. For more examples of impactful EU funded projects: [All success stories](#).

² [LAB - FAB - APP: investing in the European future we want](#); report of the independent High Level Group on maximising the impact of EU research & innovation programmes.

³ As documented in the Commission report ['Science, research and innovation performance of the EU 2022 – Building a sustainable future in uncertain times'](#) and exemplified by the recent [US Inflation Reduction Act](#).

“ *Interdisciplinary research is indispensable to tackle today’s challenges. The Commission should support all types of research, including Social Sciences and Humanities, across all parts of the framework programme and its follow-ups.* ”

Marileen Dogterom
President of the Royal Netherlands Academy of Arts and Sciences (KNAW)

IN-DEPTH LOOK

How to secure a complementary equilibrium between fundamental research, applied research and innovation?

Fundamental research, applied research and innovation, including deployment, cannot exist in isolation. To better position all types of R&I to contribute to the framework programme’s grand ambitions, Horizon must offer sufficient R&I opportunities regardless of their **Technology Readiness Levels** (TRL). Only then will the programme cater to the much-needed ideas of all excellent and impactful researchers.

Because of an increased focus on application and demonstration, higher TRL level research has become more important in Horizon Europe. More attention for lower and middle TRL levels is needed, especially in pillar 2, to restore the necessary interaction and flow between the different types of R&I.

IN-DEPTH LOOK

Towards a broader understanding of impact

Impact has become more central to the programme, but its meaning is not clear to all participants. For good reasons, different R&I actors tend to understand impact differently. For some, impact can be achieved by transferring knowledge to third parties. For others, impact is achieved through private sector uptake. In order to equip researchers and innovators from across the TRL spectrum with the appropriate means to generate impact, it is crucial to adopt a broader, more qualitative definition of the concept, reflecting the full range of achieving impact in R&I activities. A more diverse operationalization of impact can avoid the current trend towards “one size fits all” impact trajectories.

“ *NWO helps to ensure synergy within the research system by promoting coherent research agendas, connecting knowledge partners and society, across disciplines, types of research and countries. Good to see this ambition reflected in the European framework programme.* ”

Marcel Levi
President of the Dutch Research Council (NWO)

II. Excellence and impact remain the bedrock of European R&I throughout Horizon Europe

Recommendations

- Maintain excellence and impact as the overarching objectives of the programme
- Ensure that fundamental research, applied research and innovation exist in a complementary equilibrium
- National investments, reforms and peer support are needed to better connect excellence across Europe

Excellence and impact should remain the overarching objectives of the programme. The excellence criterion ensures only the best research and innovation proposals are funded – most notably through the ERC, MSCA and the thematic consortia in pillar 2, whose added value for Europe’s position as a scientific powerhouse is beyond any question. The impact criterion ensures that European R&I achievements have impact way beyond the lifetime of a project. The simultaneous application of both criteria in the programme is crucial for strengthening Europe’s knowledge base, which in turn contributes to the EU’s political, economic and societal goals.

Excellence and impact should therefore continue to play an equally important role in all pillars of Horizon Europe, excluding the ERC. Fundamental research, applied

research and innovation should exist in a complementary equilibrium, which means the programme should proportionally offer opportunities for all these types of R&I. Equally important is the balance between participation of publicly funded research institutions and that of private companies.

The logic behind the widening participation instrument is to better connect excellence. To safeguard excellence and impact across the programme, the end goal must be that the widening instrument becomes superfluous. To move closer towards this goal, national investments and reforms⁴, as well as peer support, are to accompany actions at the European level and should not be restricted to the framework programme alone.



⁴ See for example the European Court of Auditors’ Special Report ‘*Measures to widen participation in Horizon 2020 were well designed but sustainable change will mostly depend on efforts by national authorities*’.

IN-DEPTH LOOK

How to provide appropriate attention to foreign interference?

In order to protect institutional autonomy and academic freedom, knowledge institutions must remain the sole responsible actor for the protection of the multitude of valuable resources they generate through the framework programme. The principle 'as open as possible, as closed as necessary' plays a key role in assessing the risks and benefits associated with different kinds of international cooperation. This approach is successfully rolled out in the Netherlands, where knowledge institutions are undertaking substantial efforts to responsibly protect the knowledge they create. They produced *National Knowledge Security Guidelines*, in close cooperation with the government.

“It is crucial that the EU recognises the strategic importance of R&I in all policy areas, and continues to foster international research collaboration with a strong, ambitious and well-funded framework programme.”

*Pieter Duisenberg
Chairman of Universities
of the Netherlands (UNL)*

III. International collaboration is vital to the objectives of the programme

Recommendations

- Rapidly associate like-minded third countries such as the UK and Switzerland to the framework programme
- Speed up progress on the association of new partners
- Provide appropriate attention to foreign interference

Research and innovation are inherently international. From the point of view of any one region or country, the majority of new and existing knowledge is developed outside its borders. International collaboration through association agreements with like-minded third countries is therefore vital to commonly advance the global R&I agenda.

A revived emphasis on international collaboration should be accompanied by appropriate attention to foreign interference, thus adhering to the principle 'as open as possible, as closed as necessary'. This should avoid and mitigate as far as possible the harmful effects of malign actors who intrude in and exploit European R&I for their own benefit.

The EU cannot afford the persistent non-association of the United Kingdom and Switzerland. This outcome is at odds with the broader strategic goals of the Union, such as the Green Deal and open strategic autonomy. Furthermore, while we welcome the ambition to open up association to more countries, progress on this front has been disappointingly limited to date. The next framework programme should avoid delays in association as much as possible and truly live up to the principle of being as open as possible. The fast-track procedure for previously associated countries should be retained.

IN-DEPTH LOOK

Programme-level simplification through improving internal and external coherence

Programme-level simplification should happen at the political level and address both internal and external coherence.

With the increased scope of the programme, the distinction between individual instruments has become less clear. This makes it increasingly difficult for researchers and innovators to know which instrument suits their activities. It badly affects the disclosure and findability of calls. A sharper distinction between individual instruments will also enable better internal synergies within the programme, for example between the different clusters.

The increase in scope has also negatively affected its external coherence. It has become more difficult for researchers and innovators to know where the boundaries of Horizon lie and at which point adjacent programmes, such as the European Structural and Investment Funds or the Innovation Fund, might actually be more suitable for developing specific R&I ideas.

Horizon's added value for the development of the European Research Area (ERA) is currently hampered by the relatively limited budget size of calls within the dedicated ERA instrument, which are also often difficult to find. Coupled with the fact that most calls within this instrument do not exclusively revolve around R&I actions, their appeal to researchers and innovators is low. Driving the ERA policy agenda forward through the framework programme for research stipulates that Horizon should exclusively focus on offering well-disclosed, sufficiently financed R&I projects within the dedicated ERA instrument.

IN-DEPTH LOOK

Review the added value of relatively newer instruments

The added value of Bauhaus, the missions and the EIT should be carefully reviewed. To date, the purpose of Bauhaus and its relation to the other instruments in the framework programme is not clear. Its underlying goals and criteria on the project level must become more straightforward, to enable researchers and innovators to work on tangible Bauhaus projects that are consistent with the goals of Horizon. Should this not be feasible, Bauhaus could instead become a standalone programme, unconnected to Horizon.

To better enable the missions to deliver on their grand societal goals, their R&I contribution must become more tangible and easier to grasp for researchers and innovators. Moreover, given the nature of the missions, they should be better connected internally to other instruments in Horizon, especially the partnerships. More importantly, they should be better connected externally to programmes, policies and ecosystems at the global, EU, national, regional and local levels.

Over time, the goals of the EIT are better implemented by other instruments, such as the innovation ecosystems and the EIC. Its current added value can thus be questioned. The administrative complexity, lack of transparency and financial burden that are generally associated with participating further hamper the durability of the EIT in the long term.

IV. Streamlining the programme is key to avoiding fragmentation and duplication

Recommendations

- Simplify the programme at the political level to improve internal and external coherence
- Simplify the programme at the operational level to allow individual instruments to be more focused
- Review the added value of relatively newer elements

Despite the announced ambition of the European Commission towards simplification, Horizon Europe is more complex than Horizon 2020. Programme-level simplification should therefore first and foremost be addressed at the political level, where new instruments and priorities are discussed. This way, the programme's internal and external coherence can be improved. Secondly, operational improvements would allow individual instruments to be more focused. Only then are researchers and innovators enabled to deliver tangible benefits to Europe and its citizens through excellent and impactful R&I projects.

The added value of relatively newer elements is not always immediately clear. The purpose of the Bauhaus remains unclear and the missions have not yet delivered on their promise to connect Horizon with other EU or national programmes. With the arrival of a third pillar for Innovative Europe, including the EIC and innovation ecosystems, it is now unclear what function the EIT is supposed to fulfil, regardless of its implementation issues. The EIC has demonstrated its added value through its distinctive role in funding disruptive innovation, although its decision-making processes and working methods lack transparency.

Enabling instruments to focus on their respective strengths has become more difficult due to the surge in horizontal requirements. Projects in each pillar are simultaneously required to contribute to sustainability and digitisation, to be inter-, trans- or multidisciplinary and to involve all sectors of society. Given the vast size of the programme, not all instruments need to be a jack of all trades⁵. Providing more focus will improve the accessibility of different parts of the programme, thereby enabling currently underrepresented groups (for instance universities of applied science, vocational education & training providers and SMEs) to showcase excellence and impact.

⁵ The open access requirement should continue to apply across the whole framework programme, as it rightly improves cooperation within Europe, while also providing the EU with global norm-setting power on open science. Adhering to the principle 'as open as possible, as closed as necessary' is crucial here.

IN-DEPTH LOOK

Operational simplification

Operational simplification concerns different aspects: a review of the application of horizontal requirements, the improvement of the publication of calls and work programmes, the unification of the partnerships landscape, more space for smaller projects and a cautious approach to the roll-out of lump sum funding.

Reviewing the application of horizontal requirements

Currently, most projects funded by the framework programme, although differing in nature and size, are bound to the same horizontal requirements. The abundance of requirements found within calls makes it difficult for researchers and innovators to know what exactly is expected from project proposals and subsequently from project implementation.

In particular, researchers are discouraged to take up the coordination of consortia by the increasing complexity of project implementation and reporting requirements. Reinstating the possibility to sub-contract coordination tasks would be a useful first step to reverse this worrying trend.

Project preparation and implementation can become less complex and more effective if horizontal requirements are not integrated in calls by default. These requirements should be integrated only when their purpose is appropriate for the project(s) that the call aims to finance. These conditions should be specified in the legal base. The following improvements to each horizontal requirement can make their application within projects more comprehensible for researchers:

- **Inter-, trans- and multidisciplinary:** If applicable, more guidance on their definitions and possible operationalization methods is needed.
- **Do No Significant Harm:** If applicable, its evaluation criteria must be more clearly articulated and consistently applied. In its further implementation, it is crucial to avoid breaches of academic freedom.
- **Gender equality:** This requirement is currently merely a box-ticking exercise with limited efficacy. When it is applicable, it should be more strictly connected to the specific aims of a project.
- **Social Sciences and Humanities (SSH) involvement:** If applicable, researchers from the SSH domain should be involved on equal footing with researchers from other disciplines.
- **Destinations, expected impacts and expected outcomes:** If applicable, i.e. when potential impacts can reasonably be deducted from a specific project, more guidance on its underlying definitions and evaluation criteria are needed.
- **Citizen science:** If applicable, more guidelines on its intended usage are needed.

Improving the publication of calls and work programmes

The renewed strategic planning process in Horizon Europe is supposed to provide more clarity on the links between project calls and policy goals. However, the way in which this is currently designed does not provide researchers and innovators with sufficient guidance of what is expected, due to the increased amount of policy language in calls and an overemphasis on project implementation. More tangible guidance is therefore needed. In addition, the pre-publication of work programmes (possibly with a disclaimer) would help to ease application procedures, as would more stability in the functioning of the F&T portal.

Unifying the partnerships landscape

Although there are fewer partnerships in Horizon Europe compared to its predecessor, the partnerships landscape has not become less complex. It is difficult to determine which rules apply to which partnership, including financial rules and the involvement of governments or industry players. The partnerships landscape should therefore be unified as far as possible, in order to ease participation of external parties.

More space for smaller projects

The overwhelming majority of projects in pillar 2 involve large consortia with a relatively long duration. This raises the administrative cost of coordination. While these types of projects serve a clear purpose and will remain very much needed, introducing smaller and shorter projects as well would provide more room for researchers to just focus on carrying out R&I activities. This would broaden the existing options for researchers and innovators to decide which type of project is suitable for their idea. These smaller and shorter projects could also tap into the potential of currently underrepresented groups in the programme to showcase their excellence and impact.

Cautious approach to lump sum funding roll-out

The first experiences with lump sum funding suggest that this approach does not lighten the workload, but instead intensifies it, especially at the proposal stage. Moreover, the administrative burden is shifted to the consortium level. Lump sum funding also seems to decrease risk-taking in projects. Considering these harmful effects, it is too early to roll out lump sum funding on a large scale.



Neth-ER is the Brussels based association of eleven Dutch organisations working in the field of research, innovation, and education. They are:

ISO - Dutch National Student Association

JOB - Union of Vocational Students

KNAW - Royal Netherlands Academy of Arts and Sciences

LSVb - Dutch National Student Union

MBO Raad - Netherlands Association of Vocational Education Colleges

NFU - Netherlands Federation of University Medical Centres

Nuffic - Netherlands organisation for the internationalisation of education

NWO - Dutch Research Council

TNO - Netherlands Organisation for Applied Scientific Research

UNL - Netherlands Association of Universities in the Netherlands

VH - Netherlands Association of Universities of Applied Sciences



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