

Contribution from the Netherlands to the public consultation of the European research and innovation programmes 2014-2027

Introduction

Global crises – such as the Covid-19 pandemic- have shown that investing in the full spectrum of research and innovation is extremely important for a resilient and competitive Europe. Long term investments in basic research have laid the foundation for break-through technologies, like the Covid vaccines, and for deep tech innovations. We are currently facing unprecedented challenges, that call for transitions in which scientific advancement and innovative solutions will play a key role. Looking ahead, Europe more than ever needs a strong knowledge base to tackle these current and future challenges, such as – but also beyond- the green and digital transitions. Furthermore, Europe needs to valorise the generated knowledge to deliver new solutions for global challenges. We need to be ambitious and continue to strive for excellence, or Europe may not keep up with global competition. To enhance the EU's leading role in research and innovation in the world, also in view of current geopolitical tensions, it is essential that Europe is able to attract and retain talented innovators and researchers. Moreover, support for innovative entrepreneurship is important for a vibrant startup ecosystem in Europe. The global R&I scene is rapidly changing, boosted by ambitious investments worldwide. Given our strong knowledge base, Europe cannot afford to fall behind. Therefore, Europe needs a robust and ambitious Framework Programme for R&I with the necessary critical mass, based on excellence, and impact, now and in the future.

Horizon 2020, has proven to be successful. It introduced the 3-pillar structure, which successfully supported excellent research and innovation as well as mission-oriented R&I with impact, and industry participation. Under Horizon Europe, this structure was further refined to explicitly support breakthrough innovation. Horizon Europe is more ambitious and more strategic than its predecessors: it has a focus on impact-driven research and innovation, and it puts the principles of open science and open international cooperation at the forefront.

Nevertheless, there is room for improvement. New challenges lie ahead. The interim evaluation of Horizon Europe and ex-post evaluation of Horizon2020 offer an opportunity to capitalize on the programme's potential and to prepare for future developments. The Netherlands would like to contribute to this process by presenting three recommendations and priorities for Horizon Europe and beyond.

1. Excellence, impact and openness should be retained as leading principles

Strengthen the principles of excellence and impact

It is essential that the EU Framework Programmes supports the best researchers and innovators in order to tackle global challenges, like the green and digital transitions, and to boost the EU's competitiveness and growth. Therefore, excellence and impact are and should remain the leading principles of R&I policy for Europe to retain a leading role and to be able to compete internationally. Furthermore, the Framework Programmes should help safeguard scientific values and knowledge and protect scientists in a (virtual) world where they are expected to engage in open, but sometimes hostile, public debate. Horizon Europe has introduced important measures to promote gender equality. Further cultivating talent, by promoting diversity, equity and inclusion and the full integration of excellence across the social spectrum, is a key challenge, leading to better problem solving, expanding the talent pool and supporting competitiveness.

Support the whole R&I value chain and maintain balance between bottom-up and challenge-driven actions

Excellent science and smart innovation reinforce and feed into each other. Similarly, curiosity-driven research and mission-oriented R&I are both crucial for innovation. The Framework Programme should continue to address R&I throughout the entire value chain, from fundamental research to applied science and innovation. A balance between bottom-up and challenge-driven actions should also be maintained. Challenge-driven research bring focus in creating much-needed solutions, but we should also fund research that may not seem urgent today, but of which the results may become very important tomorrow. Horizon Europe should fund key technologies, as well as social innovation and provide for the essential involvement of the social sciences and humanities. In addition, facilitating the valorisation of knowledge is necessary to make sure that

research results and innovation are transformed into sustainable products, processes and services that bring economic value and benefit society.

As open as possible, as closed as necessary

International cooperation beyond European borders is crucial. In order to tackle global societal challenges together with trusted partners we need to access the worlds' best talents, expertise and resources. The mantra "As open as possible, as closed as necessary" and the focus on the EU's open strategic autonomy should be retained for the duration of the programme and in the future. Horizon Europe's broadened association policy, which allows countries from all over the world with a strong R&I capacity and shared values to become associated to the programme, is an important step in further driving excellence and pooling resources to achieve scientific progress and competitive innovation. Alongside, R&I cooperation with our long-standing and trusted partners remains important. Furthermore, Horizon Europe has made important steps towards open science. Further consolidation of this principle will increase the impact of science and innovation and further enable valorisation. This also means that open science should become the norm in scientific research and needs to be regarded as an essential part of the scientific process, for which researchers need to be acknowledged.

2. Create stability as well as flexibility: Horizon Europe budget is for Horizon Europe

The pillar structure is solid, but we need to avoid overlap

The Netherlands has been in favour of maintaining the stable structure of Horizon 2020, with its distinctive pillars, under Horizon Europe. The first pillar under Horizon Europe, Excellent Science, has proven to be very stable in its success and attractiveness for researchers. The European Research Council as a crucial driver for frontier and pioneering blue sky research. Research infrastructures are crucial to support scientific advance and innovation. This pillar therefore lays the foundation for the research and activities in the other pillars.

The second pillar, Global Challenges and European Industrial Competitiveness, with its focus on societal challenges and public-private cooperation, strengthens the impact of R&I and supports the uptake of innovative solutions in industry and society. The EU missions and partnerships are important instruments to achieve solutions to these challenges. These thematical parts of the programme should also accommodate challenge driven fundamental research, which may not solve challenges today, but could become crucial for Europe's competitiveness tomorrow.

The Netherlands also supports the third pillar that is focused on innovation and innovative ecosystems. The EIC is crucial for the scale up of breakthrough innovations and to transform innovations in new products and services to strengthen the EU's competitiveness. Supporting innovative scaleups and SME's is necessary to address the challenges arising from the continuous transitions in our economies and society.

However, the different instruments and their goals in the second and third pillar can be better aligned. Thematic priorities of the different clusters in pillar 2, the partnerships areas and the mission themes should be more streamlined to maximise synergies and to avoid overlap.

Ensure stability within the programme

Introducing strategic programming, Strategic Plans and foresight activities under Horizon Europe, enables the programme to address new and current societal challenges. Nevertheless, it has proven difficult to truly foresee challenges or crises, like the pandemic or energy shortage, in which R&I has to play its part. It is essential that the Framework Programme has enough flexibility to tackle new challenges. At the same time it should ensure stability for applicants and, leave enough critical mass to realise previously defined priorities. We need a strong and strategic programme with a clear vision for the future, that supports the R&I value chain from pioneering research ideas to innovative solutions. During the pandemic, we have experienced that there is no better preparation for unforeseen crises than investing in broad fundamental research. Horizon Europe should not be used as 'easy cash' for other purposes. Careful consideration and consultation with the Member States is necessary, especially when introducing new priorities and initiatives that may reduce the available budget for regular R&I actions and programmes within Horizon Europe. The right balance between flexibility and stability and how to reap the fruits from R&I in other policy areas without drawing too much on the R&I capacity, may be a topic that needs careful consideration in successor programmes.

Member States and stakeholders should be more actively involved

The Netherlands values the results that have been achieved by the Commission in the way that cooperation with internal and external stakeholders and the public has been re-designed. Co-creation and co-design have been important principles for Horizon Europe. The Commission and the Member States work together intensively to implement the Framework Programme (comitology), via the Horizon Europe Programme Committees. Nevertheless, co-creation of the Programme by the Commission and the Member States could be improved to increase the impact and functioning of the programme. Furthermore, cross-sectoral cooperation with key stakeholders should be a driving principle, in order to create effective and affordable solutions that address unmet needs.

3. New instruments require sufficient time to develop

The EU missions, the European Innovation Council (EIC) and the new approach for the European partnerships are very valuable for the Framework Programme and should be maintained. The Netherlands fully supports these new instruments. However, it is essential to ensure the well-functioning of these instruments and to monitor and improve them where necessary, before considering the introduction of new instruments in the programme. When developing new instruments in all parts of the programme, it is important that the Commission completes a thorough preparation before introducing them, in co-creation with the Member States, in order to create the desired impact.

More ambitious EU missions

EU Missions are important to increase the impact of EU R&I through mission-orientation and citizens' involvement. The missions have the potential to address crucial societal challenges by achieving bold and inspirational goals within a set timeframe, with tangible results for EU citizens. To reach these goals, it is essential that not just R&I but also sectoral EU policies contribute to realise these missions. Future missions can be even more ambitious if they are fully rooted in R&I and would take the large-scale and important scientific and technological challenges as a starting point, to safeguard Europe's open strategic autonomy and competitiveness and bring together the necessary elements to tackle the great challenges of our time.

European Innovation Council with speedy procedures for entrepreneurs

To ensure Europe's open strategic autonomy and competitiveness, innovative startups and scaleups need access to finance so they can scale here in the EU. The EIC is essential for the scaling up of breakthrough and deep tech innovations and to support European scaleups. The Netherlands agrees with the new set up of the EIC Accelerator programme under indirect management by the EIB, but emphasizes the need for a smooth implementation that corresponds with the needs of entrepreneurs and the European innovation landscape.

Further simplify EU partnerships

With European partnerships, private partners from industry and public partners work together to address pressing European challenges through concerted research and innovation initiatives. These projects are expensive, need critical mass and potentially have a huge impact. Individual universities, research organisations and businesses cannot realise them on their own. Therefore, we need partnerships to build these ecosystems on a European scale. The rationalization of the EU partnership landscape under Horizon Europe was a necessary step to simplify the participation for applicants. The new approach for the partnerships aims to make it simpler to participate and should make it attractive and worthwhile to re-adjust national or private investments in R&I towards a common European agenda. Nevertheless, with the new implementation modalities for the co-funded partnerships¹, the desired objective of simplification has not yet been realised. New rules and ongoing uncertainty have made them more complex for both participants and implementing agencies, which may hamper national or regional commitment and therefore hamper impact. The Netherlands urges the Commission to continue to further simplify the European partnerships in co-creation with the Member States and partnership stakeholders. The Netherlands underlines the importance of the continuation of a solid European partnership for Innovative SMEs, because it is a unique instrument for bottom-up market-driven R&I projects with international partners.

Create strong and connected research and innovation ecosystems

Research and innovation can flourish in well-connected research and innovation ecosystems. In

¹ Partnerships involving EU countries, with research funders and other public authorities at the core of the consortium.

order to attract and retain talent in Europe, it is important to create ample opportunities for researchers to gain experience within academia as well as in the private sector. Strong and connected ecosystems can facilitate intersectoral and interdisciplinary exchanges. The potential of innovative ecosystems across Europe can be further exploited by connecting local, regional and national ecosystems where appropriate, while maintaining the leading criteria of excellence and impact. More synergies between EU programmes, like between the Framework Programme and the Structural Funds are a prerequisite. Optimising these synergies is crucial in strengthening excellence throughout the EU in order to capitalize upon the full European R&I potential.

Conclusion: Making Europe a global powerhouse for R&I requires ambition

The points above are important to ensure the success of the remainder of Horizon Europe. Looking ahead, we need a robust and stable programme with a budget that is in line with the ambitions for Europe to be among the world leaders in excellent R&I. The messages in this Dutch contribution to the public consultation are not only relevant and important for Horizon Europe, but also for future Framework Programmes. The Netherlands firmly believes that a well-designed, stable and common European investment in R&I in close collaboration with the Member States and stakeholders is becoming ever more essential for the well-being of our future generations. If we want to ensure the impact of EU R&I, we need an ambitious successor programme that builds on the successful principles of Horizon Europe.