



**Ministry of Education and Research
Ministry of Enterprise and Innovation**

Opinions in view of the discussion of the next EU Framework Programme for Research and Innovation

Introduction and summary of comments

The Swedish Government wishes to see a modern budget with re-prioritisations that benefit common measures, such as security, migration, competitiveness, research and climate change adaptation. This should be achieved through significantly reduced appropriations for agricultural support and structural funds.

Joint funding for research at EU level is most relevant, and creates impact through transnational research and innovation projects and through EU-wide competition for funding. Joint funding may also be relevant when individual Member States do not have the resources to finance and carry out large research and innovation initiatives by themselves. An important prerequisite for EU funding is that the selection of R&D projects is based on the excellence criterion, without regard to any arguments of geography, solidarity or justice.

The EU Framework Programme for Research and Innovation is a prioritised part of a modern EU budget. For the next programme period of 2021-2027 the programme (working title “FP9”) should, in general terms, be an evolution of the current Horizon 2020 programme rather than a revolution. FP9 should take the next step in addressing societal challenges, bring forward solutions and create impact in society, as well as

added value for citizens. Proportionally, the FP9 budget's share of the total EU budget should increase, even in a scenario whereby the next multiannual financial framework decreases.

FP9 should build on the following basic principles:

- 1) As in Horizon 2020, projects in FP9 should be selected on the basis of excellence, with the highest ranked applications being funded.
- 2) Both research and innovation should continue to be integrated into the next framework programme.
- 3) Projects in FP9 should mainly be cross-border cooperation, in which universities, research institutes, small and large companies, the public sector and other actors can participate.
- 4) Projects in FP9 should mainly be funded through grants.
- 5) The structure of Horizon 2020 with three pillars should be retained.
- 6) Excellent basic research, research relevant to businesses, and research that meets social needs should be included.
- 7) Projects under FP9 should be characterised by the vision of Open Science, Open Innovation and Open to the World.
- 8) The autonomy of the European Research Council must be maintained.

Measures for further development in FP9 based on previous framework programmes:

- Introduce missions that can promote systemic change in society, and contribute to meeting the UN's sustainability goals.
- Create stronger synergies between cohesion policy and research and innovation policy, not least by simplifying and adapting funding rules.
- Integrate the European Innovation Council (EIC) into the Framework Programme, with a clear focus towards disruptive, market-creating and scalable innovations.
- Develop support measures for test and demonstration facilities to increase Europe's competitiveness in the development of new products and services.
- Make it easier for countries outside European research collaboration to participate in FP9.
- Integrate gender equality and gender perspectives in all parts of the Framework Programme.

Views on the next framework programme

The following suggestions are structured according to the ‘pillars’ in Horizon 2020.

Excellence

- The European Research Council (ERC) should continue, as an independent body, to support frontier research ideas from researchers at all stages of their career. The ERC is a central part of the European research policy.

- It is essential that the future and emerging technologies programmes continue to launch broad calls for a wide range of areas, while allowing a high level of risk in projects. This must be done without focus on specific sectors. It is more important to guarantee the implementation of existing projects than to launch new flagship projects, requiring additional extensive resources. Any future flagships need to be aligned with the aims of possible missions within FP9.

- ESFRI’s priorities should be more closely tied to the research infrastructure initiatives in FP9, focusing more on future needs and on European added value. Funding of research infrastructures at European level should cover various construction and development processes. Researcher, business and public-sector access to international high-quality research infrastructure projects strengthens research quality, European competitiveness and social benefits.

- The Marie Skłodowska Curie actions should further develop the trans-sectoral mobility of researchers, especially involving the business sector. Special efforts are needed to enable European research infrastructures to benefit from researcher mobility. The existing support and service for researchers’ mobility between organisations in different countries provided by the Commission is important, and should continue.

Industrial Leadership

- The key enablers for societal challenges and innovation should be revised and supplemented with non-technological areas that are relevant to societal challenges. Initiatives may also be formulated as challenges with a mission orientation.
- To strengthen innovation capacity, a European Innovation Council (EIC) should be introduced under the Industrial Leadership pillar. The EIC should support innovators' breakthrough ideas for creating disruptive innovations with potential to create new markets, grow and scale up. The EIC should target not only individual innovators but also collaborative activities involving researchers, innovators and companies.
- Support to large enterprises, as well as small and medium-sized enterprises (SMEs), should continue in FP9 through cooperation projects. In addition, specific support instruments for SMEs to provide capital and skills have shown positive effects and should remain. The EU research and innovation policy should be developed in coordination with the industrial strategy to achieve synergies. Synergies should also be strengthened with other initiatives aimed at small and large enterprises, such as the Eureka network. The aim of risk financing should be to create clear and broad instruments to increase stakeholders' understanding of funding rules.
- To increase European competitiveness in developing new products and services, FP9 should support wider use of test and demonstration facilities. Academia, research institutes, industry and the public sector alike can benefit from access to test and demonstration facilities during development processes, and for validation of products and services.

Societal Challenges

- FP9 should take further steps towards a challenge-driven and mission-oriented programme to achieve clear impact for society. As

highlighted in the Lund Revisited Declaration 2015¹, the focus should be on coordination, excellent research and innovation, global cooperation and impacts in society, to successfully address societal challenges. The goal must be to bring together resources and knowledge from different disciplines to jointly tackle a societal challenge. Interaction between the research community, users, the public sector and industry throughout the research and innovation process is a key factor. In addition, a more interdisciplinary approach is needed, with social sciences and humanities being included as early as the preparation of the projects, where appropriate. In this context, it is important to point out that basic research are needed in addition to market and societal-needs activities to achieve impact in society. The tendency towards a lower proportion of basic research within collaborative projects, as noted in Horizon 2020, should be counteracted.

- Challenges outlined by Swedish actors at national level would also be relevant to the design of the next framework programme. Challenges outlined at national level include climate and environment, health, increased digital transformation, a sustainable society and improved knowledge levels in the Swedish school and education system.
- Potential users of results from challenge-driven projects should contribute to defining the challenges and propose what solutions are needed. The Swedish innovation agency Vinnova's 'Challenge-driven innovation' programme combines a demand-driven challenge perspective with a non-prescriptive approach. The programme could provide a model to inspire the development of the challenge-driven part of FP9. Meeting societal challenges requires long-term projects, which also needs to be considered in the implementation of FP9. There should also be greater possibilities for project proposers to choose the appropriate instrument for target fulfilment.

¹ Greater impacts on the challenges have to be achieved through involvement of the public sector and industry in knowledge creation, with a stronger focus on open innovation and the role of end-users.

General points

- Research and innovation should be fully integrated in FP9. Societal impact and benefits can be maximised through a framework programme that integrates instruments for both research and innovation, and supports cooperation between universities, research institutes, industry, the public sector and other actors from civil society, for example. Instruments for research and innovation activities are therefore needed in all parts of the framework programme. Fundamental research must continue to play an important role in tackling the challenges of the future. For universities and other higher education institutions to be able to contribute to the development of society and the competitiveness of the business sector, and to respond to the societal challenges we face, a holistic view of the activities is needed. Sweden therefore wishes to emphasise the importance of coherent knowledge environments, with close links between research and education at various levels.
- FP9 must continue work to simplify participation in the framework programme. The administrative burden should be reduced in FP9, e.g. by accepting national accounting and financial management methods to a greater extent, in order to avoid double accounting systems for participating organisations. For example, it should be possible to apply the funding model for ERC projects in other parts of FP9. There must also be a better balance between both trust and control in the implementation of the programme, as well as set goals and evaluation of results.
- FP9 should facilitate the participation of countries outside European research collaboration ('third countries') in collaboration to achieve common goals. It is therefore important to increase the attractiveness of FP9 to third country actors. Simplifications are needed for the countries participating without receiving grants from the Framework Programme, as well as for countries associated with FP9. The framework programme should also find synergies with the COST and Eureka programmes to this end. COST can contribute as a proactive instrument to facilitate and stimulate the formation of networks of excellence and consortia with participants from different actors in third countries. EUREKA should be used to promote

projects with participants from countries outside of European research collaboration.

- Activities in FP9 should build upon experiences from the ‘widening participation’ activity in Horizon 2020, not least from participating organisations. The focus should be on facilitating participation for EU countries with previously low participation in the Framework Programme through specific support measures. These should be supplemented with national efforts to increase investment in research and innovation.
- Capacity-building in research and innovation should be strengthened through the further development of regional smart specialisation strategies. These should be used as platforms for dialogue and to ensure synergies and strategic coordination between different programmes at regional, national and EU level. EU programmes that include funding for research and innovation activities should complement each other, and funding rules through different programmes should be adapted to facilitate synergies.
- Furthermore, FP9 should continue the development of an open science system within all applicable parts of the programme. Publicly funded research processes should, as far as possible, be made open, to promote knowledge dissemination and innovation. Communication, not least with citizens, regarding the social dimension of the Framework Programme must be improved to clarify its impact.
- The current gender equality activities, focusing on equal representation of women and men and specific initiatives for gender research, should be complemented with gender-mainstreaming as a strategy. Equality and gender should be considered multi-dimensional quality-enhancing perspectives and be integrated into all parts of the Framework Programme. This means that gender equality perspectives should also be integrated into all strategic considerations.
- Barriers to participation in existing partnership programmes for research and innovation must be eliminated. For example,

requirements for participating MS to be financially responsible for actors from other MS must be removed. The partnership programmes involve a high administrative burden for many countries, and the framework programme should provide better administrative support for more effective implementation of the programmes. The programmes should be streamlined and developed so that they contribute to achieving the overall missions discussed for the next framework programme. A long-term strategy is needed for the partnership programmes to be more effective and more clearly contribute to the European Research Area. This strategy should focus on efforts with European added value and use of framework programme instruments. FP9 should continue to support Member State-driven programmes, such as Joint Programming Initiatives, in a flexible and responsive manner.

- The rules and control requirements applied by the European Institute of Innovation and Technology (EIT) for existing Knowledge and Innovation Communities (KICs) are perceived as unnecessarily detailed based on the task assigned to the EIT. Different requirements seem to apply to different actors. Rules and controls should be better adapted to the nature of the activity in FP9.