The Swedish Research Council's recommendations for the EU's framework programme FP10

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Memorandum

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Research, innovation, and development are crucial for the EU's future competitiveness and prosperity. The EU's position in the world is strengthened by these activities, which create economic growth and job opportunities while enabling the EU to find solutions to global challenges in areas such as climate and public health, for instance. Through the EU's framework programme for research and innovation, collaborations are facilitated, and the effect of research and innovation is reinforced through joint initiatives.

In order for the next framework programme for research and innovation (Framework Programme 10 – FP10) to be able to enhance the competitiveness of the EU and consequently Sweden, it is essential that actors in research and innovation contribute to its developing with their knowledge and experiences. The Swedish Research Council has broad expertise in and experience of supporting and promoting excellent researcher-initiated research in Sweden and the EU. This document is our contribution to a framework programme for a stronger Europe.

The Swedish Research Council's recommendations in brief

The recommendations are listed in no particular order.

- **Excellence** is a prerequisite for the EU to remain a world leader in research and innovation. Excellence must permeate all initiatives and be the overarching principle for the framework programme.
- **Research infrastructures are** crucial for cutting-edge research and must continue as an excellence-driven sub-programme in Pillar I. Synergies between the research infrastructure programme and other parts of the framework programme need to be further enhanced.
- **Stable implementation** of the framework programme in the form of a robust budget, as well as transparency, clarity, and focus in governance and implementation, are essential for the framework programme to be attractive to the participants.
- **Structural stability** is necessary for applicants to feel at home and easily navigate their way in the framework programme. There is a need for change in individual sub-programmes, and for the EU missions, but the pillar structure and the successful ERC and MSCA programmes must be retained.
- **The partnerships** require a more transparent and coherent process for identifying, co-creating and, as necessary, terminating partnerships, where the 'one in, one out' principle should apply. The administrative burden for all parties involved must be reduced, and the process simplified. The number of partnerships is sufficient.
- **The societal sciences and humanities** need to be integrated fully in the framework programme, from the development of work programmes to the introduction of relevant competences in the evaluation panels. Broaden the thematic focus of Cluster 2.
- In the context of a more geopolitically unstable and multi-polar world, ensuring a balance between openness and security through **responsible internationalisation** is the right way forward in order not to hamper Europe's development. International collaboration is a prerequisite for knowledge development, and the basis for successful research and innovation.
- **Open science** is a driver of quality and needs to be the *modus operandi* of research. The transition towards an open science system, as well as dedicated calls for public engagement, including science communication, needs to continue.
- **Digital connectivity and the management of sensitive data** need to be prioritised and include initiatives for robust and secure sharing of data and high-performance computing (HPC). This is a prerequisite for several urgent research fields.

Key priorities for a successful framework programme

The Swedish Research Council has identified nine key priorities for a successful framework programme in research and innovation. These priorities are listed in no particular order, and set out our proposals for the co-creation of the next framework programme and how it can further contribute to address societal challenges and increase the EU's competitiveness.

Excellence – the overarching principle and foundation of the framework programme

The objective of the framework programme is to ensure that the EU maintains its position as a world leader in research and innovation. To achieve this, it is essential that the excellence perspective permeates all initiatives. Excellence must therefore continue to be the overarching principle and main criterion within the framework programme.

The ERC – a European success story

Safeguard the independence of the European Research Council (ERC) for its continued excellence and the success of European research.

- The ERC is the EU's flagship programme for excellent, researcher-initiated research, and must continue to receive strong support in the next framework programme. The ERC's funding not only leads to ground-breaking research, but it also spurs innovation. According to a study on the impact of the ERC on innovation, 40% of the ERC-funded projects generated research that was subsequently cited in patent applications[1].
- The independence of the ERC's Scientific Council needs to be safeguarded, as it plays a vital role in ensuring the effectiveness of both the strategic and the operational work of the ERC. A contributing factor to the ERC's success is the independent and rigorous evaluation process. It is of such high quality that successful researchers who are not offered funding due to insufficient budgets within the ERC may instead receive the corresponding funding via national sources on the basis of the evaluation made.

Basic research – a prerequisite for all parts of the framework programme

Invest in excellent researcher-initiated basic research that is run bottom-up and in broad collaborations to maintain, strengthen, and expand the foundation for a knowledge-based society.

- The framework programme of the future must continue giving strong support to excellent researcher-initiated basic research to address the challenges of the future. Basic research is the foundation of a knowledge-based society. Furthermore, it is a prerequisite for the framework programme's more thematic and challenge-driven parts, as well as for innovative solutions to our societal problems. We cannot predict what challenges the future will bring, and

[1] Assessing the influence of ERC-funded Research on Patented Inventions (pdf). Final report, 11 November 2022.

disruptive technologies can emerge in unexpected ways. Both the COVID-19 pandemic and battery research are telling examples of this.

- More investment in excellent collaborative bottom-up projects within the challenge-oriented pillar (Pillar II in Horizon Europe) is desirable, even at low TRL levels, in areas that are relevant to the cluster in question.

Research infrastructures

Continue investing in an excellence-driven sub-programme for research infrastructure, and clarify the synergies between the research infrastructure programme and other parts of FP10. Research infrastructures strengthen Europe's competitiveness and can be instrumental for ground-breaking research.

- The excellence perspective is central in development and operation of research infrastructures, and must be the main criterion when access to them is to be allocated.
- Research infrastructure needs to have its own budget line and be located in the excellence pillar (Pillar I).
- Develop a clear definition of technology infrastructures and clarify the relationship between research infrastructures and technology infrastructures.
- The Commission needs to clarify to applicants the synergies that exist between research infrastructures and the thematic work programmes in the clusters. For example, there are calls within the research infrastructure programme that are thematically relevant to the clusters.

Stable implementation and focus over time

FP10 must be attractive to participants. This requires a stable budget, as well as coherence and transparency in the governance and implementation of the programme.

Budget aspects

Safeguard the budget for FP10, in order to guarantee the funding of research of the highest quality.

- FP10 requires an increased budget compared to Horizon Europe's 95.5 billion EUR, so that it can address the challenges we are facing and manage the large proportion of top-ranked but unfunded projects due to insufficient budget.[2] This can be achieved without increasing the Member States' expenditure, through re-prioritisation between different programmes in the long-term budget.
- The budget for Pillar I needs to be increased substantially compared with today, in view of the impact of the pillar. Pillar I also creates added value for the rest of the programme, and plays a significant role in enhancing the EU's competitiveness.

[2] The amount is estimated at 159 billion EUR according to the report Ex post evaluation of Horizon 2020, the EU framework programme for research and innovation (pdf) (COM(2024) 49 final).

- The set budget should remain in place throughout the programme period. Any changes to the budget must be preceded by a transparent and democratic decision-making process and impact assessment.
- The need for a stable budget means that the European Commission should investigate whether and how a reserve funding mechanism based on the model that exists within Cluster 1 (Health) could be established for the entire framework programme.

Governance of the framework programme

Develop more transparent and coherent processes for the design and governance of the framework programme via the programme committees, in dialogue with Member States/Associated Countries and in respect of national consultation processes. Consider an internal coordination function within the Commission to ensure internal coherence between different units and directorates.

- The programme committees have a pivotal role in the co-creation of the work programmes by the Commission and the Member States, and in safeguarding the Member States' impact in the process. However, a more coherent and transparent process is required, where documentation is shared in a timely manner, to allow for and respect national consultation processes.
- The Strategic Programme Committee should be retained, in addition to the committees that exist for each sub-programme. It should focus on strategic and fully reviewed issues to a greater extent than at present.
- The Commission should establish an internal coordination function to ensure and facilitate the internal coherence between the different units and directorates. It is important to ensure that programme committees and expert teams are consulted in the correct order, which is currently not the case.

Structural stability and change

Retain the pillar structure and the successful ERC and Marie Sklodowska Curie Actions (MSCA) programmes. Applicants must feel at home and easily navigate their way in the next framework programme. However, change is needed in individual sub-programmes.

- The Swedish Research Council does not want to see any changes to the ERC and the MSCA, as they are successful and attractive programmes with high European added value, and contribute to the EU's long-term competitiveness.
- Retain the pillar structure and avoid creating new instruments. The framework programme needs an accessible and understandable structure, and it is crucial to continue the efforts to simplify the application process and reduce the administrative burden for applicants.
- Missions should be lifted out of the framework programme. They do not contain research and innovation to a sufficiently high extent, and would benefit from a new location, where their goal of transformative societal change can be better addressed. The framework programme can fund the R&I parts of the missions.

- Measures for widening participation and increasing the research and innovation capacity of the countries with the weakest performance (EU13, Portugal, and Greece) should continue to reside in a separate sub-programme. This is to ensure excellence is the guiding principle for the remainder of the framework programme.
- Widening participation can preferably be separated from the European Research Area (ERA). ERA issues of system-changing nature should be dealt with at a high level of aggregation – for example in conjunction with the Strategic Programme Committee.
- Develop indicators for monitoring cross-cutting issues, such as public engagement, gender equality, and societal sciences and humanities. This was not the case in Horizon 2020, and the ex-post evaluation of the programme demonstrated that these cross-cutting issues were not adequately managed.

The partnerships

Define the process for identifying, co-creating and, as necessary, terminating partnerships. It is also important to streamline the process and reduce the administrative burden for the parties involved. The number of partnerships is sufficient.

- The Swedish Research Council is supportive of the partnership instrument, but does not wish to see an increase in the number of partnerships. It is essential that they are aligned with and complementary to other initiatives within the framework programme.
- The process for identifying and selecting new partnerships must be transparent and entail co-creation between the Commission and the Member States. In the process, the total number of partnerships needs to be clear from the start.
- It must be possible to terminate partnerships and not extend them routinely, so that the portfolio remains balanced and initiatives in new, urgent areas can be initiated. The number of partnerships is sufficient today, and the ‘one in, one out’ principle should apply.
- Review the balance between partnerships and the regular calls for proposals within the clusters. The clusters are impacted to differing degrees by the partnerships, depending on the number of partnerships that are located within each cluster. Too many partnerships within a cluster reduce the available budget for regular calls within the cluster.
- The administrative burden of the partnerships must be reduced and the process simplified, as they demand a significant amount of resources from the Member States.

Strengthen the societal sciences and humanities

Integrate the societal sciences and humanities (SSH) fully in the framework programme, and broaden the thematical focus of Cluster 2. The SSH are fundamental disciplines in their own rights, and crucial for enabling us to understand ourselves and the societies we live in. In addition, they nurture European values, such as resilience, sustainability, democracy, and openness. SSH

also strengthen other research fields and are crucial for managing complex problems within the green and digital transitions.

- SSH need to be integrated already at the outset of the programme development process. This should be clarified in the legislation for the next framework programme. In addition, relevant competence in the SSH area is also required in the evaluation panels.
- A knowledge-based society relies on a well-educated population and an adequate supply of skills. These perspectives need to have a more prominent place in the next framework programme.
- Cluster 2 needs a broader thematic focus to encompass a larger part of the SSH domains.

Responsible internationalisation – a balance between openness and security

Ensure that the need for increased research security is balanced with the need for openness. Research is and must remain an international endeavor, despite a geopolitically more unstable and multi-polar world.

- International collaborations must be promoted and facilitated, with respect for fundamental values and principles identified in the Pact for Research and Innovation in Europe[3]; they are a prerequisite for quality and knowledge development, and therefore essential for Europe's long-term competitiveness.
- The increased focus on research security needs to be balanced with openness and international collaboration; the guiding principle of the framework programme "as open as possible and as closed as necessary" must still apply. Openness in this context refers both to openness in international collaborations – which encompasses the understanding of the "cost" of not collaborating – and the continued efforts to realise an open science system.
- Risks are best assessed at project level. Support to researchers implementing responsible internationalisation needs to increase, rather than introducing restrictions based on thematic research areas.
- Collaboration with like-minded countries on critical technologies must be promoted, so as not to hamper development in these areas.
- Dual-use research must be carefully monitored, also in budget terms, and be possible to adjust subsequently. Civilian needs must not be overlooked and negatively impacted. The geopolitical situation has put the issue of whether the framework programme's current exclusive focus on civilian research use should be removed high on the agenda. The Swedish Research Council has no principled objections to the inclusion of dual-use research, given the inherent difficulty in determining in advance the possible areas of use of any research topic. Any negative consequences for synergies, collaboration (including international collaboration), impact, and civilian research need to be identified, monitored, and counteracted.

[3] Council Recommendation for a Pact for Research and Innovation in Europe, Legislative acts and other instruments, Council of the European Union (pdf) (13701/21)

Open science as the *modus operandi* of research

The efforts to support open science need to be continued. An open science system is a driving force for quality, and makes the research process more open and accessible. Dedicated calls for proposals for public engagement, including science communication, need to be maintained as well.

- The transition towards open science needs to continue. This includes making research data accessible (according to the FAIR principles), open access to publications, and public engagement, which also includes science communication.
- Dedicated calls for science communication should be maintained, given the field's current developmental phase and the high demand for co-creation.

Digital connectivity and the management of sensitive data

Prioritise digital connectivity and investments in technology for secure data sharing, modern data storage, and high-performance computing (HPC). Robust data management is a prerequisite for numerous pressing research areas and the management of sensitive data.

- Connectivity in the form of an eco-system of digital infrastructures - where high-performance computer systems, cloud services, artificial intelligence, and networks interact and function together - needs to be a priority for the next framework programme, but is also a prerequisite for realising the EU's data strategy. Key research areas, such as precision medicine and pharmaceutical development, which conduct research on sensitive data, are dependent on digital connectivity. This, in turn, requires new solutions for data management and digital networks.
- The need for access to and protection of sensitive data that the data owner wants to control has led to increased focus on how data are shared, saved, and made accessible. This, in turn, will increase the need for data storage (for example via 'edge computing', and microdata centres), data spaces and secure processing environments, which the next framework programme needs to make allowance for.
- The next framework programme needs to include investment in tools and facilities that can support coordination, management, and sharing of data, and that simultaneously offer suitable security mechanisms and secure processing environments.
- The need for investment in the areas mentioned above means that the next framework programme needs to prioritise investment in cloud services and high-performance computing systems (HPC).