

Background paper: First working session

**The transformative nature of the European
Framework for Research and Innovation**



Informal Meeting of Ministers responsible for Competitiveness (Research)

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Background Paper – first working session: ‘The transformative nature of the European Framework for Research and Innovation’

Since their inception in 1984, the successive European Framework Programmes for Research and Innovation (FPs) have significantly expanded in terms of scope, objectives, programme parts, pillar instruments and planning processes. Originally designed to primarily strengthen the European Communities' scientific and technological bases, currently FPs are a cornerstone of the European Research and Innovation (R&I) policy.¹ They are the EU's main instrument for generating world-class science and strengthening its human capital, enhancing Europe's competitiveness and addressing the Union's policy priorities while creating value for European citizens, the economy and society. At the same time FPs contribute to the realisation of the European Research Area (ERA) and promote international collaboration based on balanced and reciprocal openness, while adhering to shared fundamental values and principles. The contribution of R&I is essential for tackling major societal challenges and for strengthening European resilience and competitiveness, especially in the changing geopolitical context. **As a consequence, as well as prerequisite, the budget allocated to these Framework Programmes has increased significantly, from EUR 3.27 billion for FP1 (1984-1987) to EUR 95.5 billion for Horizon Europe (2021-2027).** However, considering that the total R&I spending for the FP amounts to less than 5% of the total R&D expenditure in the EU,² to achieve all abovementioned priorities this needs to go hand in hand with strong performing national and regional R&I systems, reaching national investment targets of 3% of the GDP, as reiterated in the Pact for Research and Innovation in Europe.³

¹As laid out in TFEU Article 179, the EU's research and innovation policy has the objective of strengthening the EU's scientific and technological bases by achieving a European Research Area in which researchers, scientific knowledge and technology circulate freely, while also promoting all the research activities deemed necessary by virtue of other Chapters in the Treaties. This gives it a very broad mandate to support Europe's excellence in science and technology and to contribute to the EU's main priorities, which include but are not limited to long-term challenges such as the green and digital transitions, building and safeguarding a resilient, inclusive and democratic Europe, as well as addressing the implications of demographic challenges.

Treaty on the Functioning of the European Union of 13 December 2007 — consolidated version (OJ C 202, 7.6.2016, pp. 47-360) <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:12012E/TXT:en:PDF>

² EUROSTAT (1 December 2023): The total EU expenditure on R&D reached EUR 352 billion in 2022. 4 Member States recorded the R&D intensity above 3%, 8 Member States are below 1%. The FP expenditure was EUR 15.31 billion in 2022.

³ Council recommendation on a Pact for Research and Innovation in Europe, 19 November 2021.

The evolution of the transformative nature of the Framework Programme

The successive Framework Programmes have increasingly broadened their policy goals from mainly focusing on pre-competitive collaborative research in order to strengthen the European scientific and technological bases to integrating more transformative innovation policies that focus on tackling societal challenges and fostering deeper systemic societal transformation.⁴ New instruments and tools were gradually added to the FPs prioritising R&I activities that have the potential to fundamentally or systemically transform social, economic and environmental systems and create a more sustainable and resilient society and economy. While always adhering to the driving principle of excellence, the R&I agenda of the consecutive FPs became more aligned with societal needs and priorities.

Following the launch of the ERA and the adoption of the Lisbon Strategy in 2000, instruments were added in **FP6 (2002-2006)** to strengthen the foundations of the ERA and to create critical mass in objective-driven research, such as Integrated Projects, Networks of Excellence, and ERA-NETs. The following Framework Programme **FP7 (2007-2014)** strengthened the scientific and technological impact of the FP by establishing the European Research Council, pursuing excellence in frontier research and strengthening world-class science. FP7 increased the focus on human potential, training and mobility across the ERA by strengthening the Marie Skłodowska-Curie Actions. FP7 also focused on enhancing private sector participation by establishing better conditions for Small and Medium-sized Enterprises participation and by creating Public-Private Instruments as well as on ecosystem creation by establishing the European Institute of Innovation and Technology. **Horizon 2020 (2014-2020)**, in line with the Europe 2020 Strategy and more specifically the Innovation Union Flagship, covered the entire innovation pipeline, from fundamental to applied and industry-driven research. Horizon 2020 introduced a dedicated focus on societal challenges based on the Sustainable Development Goals and experimented with Focus Areas to create more impact in certain priority areas, with the aim to avoid spreading investments too thinly. A new priority on Open Science contributed to an enhanced dissemination and valorisation potential of research results, as well as stimulating public engagement in science. In addition, a dedicated 'Spreading Excellence and Widening Participation' component was introduced, aimed to tackle the innovation divide. **Horizon Europe (2021-2027)** continues the focus on excellent science, support for innovation, and tackling global challenges in a directional approach, putting emphasis on stakeholder participation, strategic planning and policy coordination to achieve societal transformation, which becomes most visible through the R&I Missions. Additionally, the European Innovation Council was established to support breakthrough market-creating innovation and support for scale-up. Moreover, stronger focus was put on creating synergies between EU programmes, and between national/regional and EU programmes.

⁴ European Commission, Directorate-General for Research and Innovation, Cavicchi, B., Peiffer-Smadja, O., Ravet, J. et al., *The transformative nature of the European framework programme for research and innovation – Analysis of its evolution between 2002-2023*, Publications Office of the European Union, 2023, <https://data.europa.eu/doi/10.2777/73000>

Finally, developing the ERA is not only achieved through the EU's Framework Programme, but also by designing specific policies, as outlined in the Pact for Research and Innovation in Europe.

The way forward?

The gradual increase in transformative innovation policies in consecutive Framework Programmes, by contributing to tackling major societal challenges, implies a shift towards a more strategic approach and more **directionality**, prioritising those domains that are of critical importance for the EU. The subsequent FPs moved towards **demand articulation** involving governments, industry, academia and society including citizens in setting a shared direction of change, but also increasing the potential for valorisation of the knowledge created. The overarching aim is to generate a systemic and long-term impact on society towards more sustainability and resilience. Such systemic impact also gradually requires more and better **policy coordination** across domains beyond R&I as well as between the EU and national/regional levels.⁵ Adequate **monitoring** of the impact of the transformative approach is needed, coupled with **flexibility** to enable necessary policy adjustments. Better **communication** with and involvement of civil society is to be fostered. Not simply to explain results at the end, but, throughout the R&I process, to ensure effective impacts and ultimately to tackle societal challenges participatively and inclusively.

Questions for discussion

In light of the above, ministers are invited to give their views on the following questions:

1. To what extent does this evolution towards a more transformative EU R&I policy correspond with what the core task(s) of FPs should be?
2. Which changes to FPs and their design process should be made to maintain or strengthen these core task(s)?
3. How does the evolution towards a more transformative EU R&I policy resonate within your national/regional R&I policy context?

⁵ Council conclusions on strengthening the role and impact of research and innovation in the policymaking process in the Union, 8 December 2023.