



# FP 8 in a new European research and innovation landscape

A reflection paper



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## Introduction

There is currently an intensive process underway to develop the next framework programme for R&D in Europe. The current one, FP7, is running from 2007 to 2013, and various stakeholders in Europe are preparing inputs and positions to the process to help define structure, scope and content of a new FP8 running from 2014. The Norwegian Ministry of Education and Research has recently launched a national process to generate inputs for the preparation of a national position on the FP8 from Norway.

It is with this process in mind that the Research Council of Norway wishes to contribute to the debate and development by producing this reflection paper. The RCN is the key actor and stakeholder in Norway, playing a multitude of roles at the interface between the European R&D funding and the Norwegian research and innovation system. It is mandated by the Ministry of Education and Research to ensure a maximum participation in the FP by Norwegian entities, and to advise the Ministry and other stakeholders on EU and ERA policy issues. It delegates experts to committees and expert groups under FP7 and related programmes. RCN therefore hopes that the present reflection paper will prove useful and fruitful in the efforts to define a new European research and innovation landscape.

## Context: A new European research and innovation landscape

The context for a new FP starting from 2014 is dramatically different from the mid-2000s when FP7 was designed. In short, the following developments have occurred that should have a significant impact on the new FP:

- The European Research Area (ERA) has made great steps forward through the Ljubljana process starting in 2008. Hence, the ERA is being more clearly defined, with explicit reference to the five ERA initiatives: Joint Programming, Knowledge Transfer, Research Careers, Research Infrastructures, and International Cooperation. The current FP is a core part of the ERA, and contains several instruments aimed at ensuring momentum of the ERA development. This points also to a future role for the FP as a EU level facilitator for the further development of ERA.
- The financial crisis that intensified in 2008 and which is still lingering, has reinforced the focus on the Lisbon objectives of strengthening Europe's competitiveness and innovative capacity. Research and development is seen ever more as a necessary path of investment to ensure Europe's competitiveness and welfare in the future. It is therefore likely that additional financial resources will be made available for coordinated efforts in this area.
- A new policy push has recently been made to define a flagship initiative in the Europe 2020 strategy: The Innovation Union adopted by the Commission on the 7<sup>th</sup> October points to much more integrated approach to research and innovation, including expanding the financial resources and including appropriate instruments to ensure leverage effects.
- The combined effects of globalization and increasing global challenges related to issues such as climate, energy, and food security highlights the need for concerted efforts with other countries and regions of the world as well as for prioritization of resources.
- There is a broad understanding that the scientific base and attractiveness of Europe is key to its future.
- The FP7 has recently been assessed in a mid-term evaluation, confirming both the great added value of this EU-level programme, as well as the success of several new instruments such as the European Research Council. However, the evaluation also points to the need for a quantum leap in simplification of the FPs administration and procedures, echoing clear conclusions in the European Council.

These and other developments suggest that the new FP8 will be different, playing a different role in the European landscape.

## Challenges facing a new FP

Although FP7 has evolved to become a complex funding instrument, it is still fair to say that it represents a common pot on the European level to ensure an added value on top of national R&D efforts. However, the above context signifies that the new FP8 will have to address several challenges that are new or that have evolved in ways that demand a coherent and strategic response. The most important ones seem to be:

- *Rebalancing of risk and control.* This lies at the heart of the current attention to simplification of the FP, and RCN supports such a rebalancing wholeheartedly. However, the challenge has wider implications, for example that as FP7 and its predecessors to a great extent have been centralized programmes under central control, the new FP8, being designed in a new ERA landscape, may be much more decentralized and relying on implementation through national or other means. The ERA points not only to a rebalancing between risk and control, but also to redistribution of risk taking and control management.
- *Renewing the interface between research and innovation.* FP7 has been understood to be “pre-competitive” research, while innovation activities have been supported through other means, such as the Community Innovation Programme (CIP). However, FP7 has significant innovation components built into its mode of operation, for example cooperative projects between enterprises and research institutions. Still, innovation needs to be far more integrated with research in an overarching strategic approach, including new interfaces with new financial resources, effective linkages between frontier research and innovation, and a broad focus on innovation to include services and organizational innovation.
- *Balancing competitiveness and sustainable development:* The financial crisis has illuminated a deeper and long lasting problem: Europe has experienced over many years high unemployment rates, budget deficits, and fiscal overstretching. On the other hand, serious ecological challenges and limitations need to be met. Hence, FP8 needs to face up to a need to combine research and innovation for both competitiveness and sustainable development, as is illustrated in the concept of eco-innovation.
- *Building interfaces between EU and national funding:* The recent development of ERA has highlighted an immature interface between national funding and EU sources. FP8 needs to address this and provide constructive mechanisms for effective interplays between the two levels, and with other sources. A coherent framework for variable geometries to include national funding should be a priority. This should also include a coherent and harmonized system of funding mechanisms across the growing number of programmes and instruments in ERA.

## Key Principles and Role for FP8

Based on the above, the emerging role for FP8 in the new landscape is not so much a centralized programme and a common pot, but a facilitator and an arena for new combinations between institutions, sectors, funding sources, and political levels. Fulfilling this role, RCN suggests several basic principles on which the FP8 should be designed.

- FP8 should play a key role in further reinforcing and strengthening the European science base and capacity as the core component in the European research and innovation system.
- Its funding mechanisms should be designed with a view to ensure broad and significant leverage effects, for example through triggering financial resources beyond EU funding. Funding should also be open and transparent, avoiding creating closed funding situations in e.g. joint programmes or instruments partly outside the normal programme setup.
- In the context of the need to reinforce the Lisbon objectives, many countries and institutions have argued that structural funds and other resources can be integrated in or aligned to research and innovation objectives. If that will be followed up, the same principle should then be made valid for the EEA Financial Mechanism.
- By the same token, the RCN supports the increasing attention to innovation, but innovation in relation to FP8 should first and foremost be addressed according to the strategic interests of the business community as well as public sector and services innovation. The EUROSTARS initiative managed by EUREKA is a useful example.
- The FP8 should be a driving force in ERA, and RCN suggests in particular that it be given financial resources to support strong European efforts through Joint Programmes and Research Infrastructures.
- Relative to the FP7, the FP8 should streamline its thematic priorities, giving more attention and resources to a core set of themes related to global challenges, while leaving other parts of the budget more thematically open.
- The FP8 needs to be designed with simplification in mind, in particular it will be important to drastically simplify application procedures and financial regulations, but also ensuring a coherent and harmonized system across all FP8 programmes and instruments.
- While FP7 has significant activities with other countries and regions of the world through international cooperation, FP8 should reinforce a more strategic approach, with less weight on open participation supported by FP funds and more on strategic cooperation with key partners on selected areas. This also leads to developing options for new multilateral cooperative solutions in areas of global concern, as well as ensuring inclusion of developing countries in areas related to global challenges.

## A Proposed Structure for FP8 in ERA

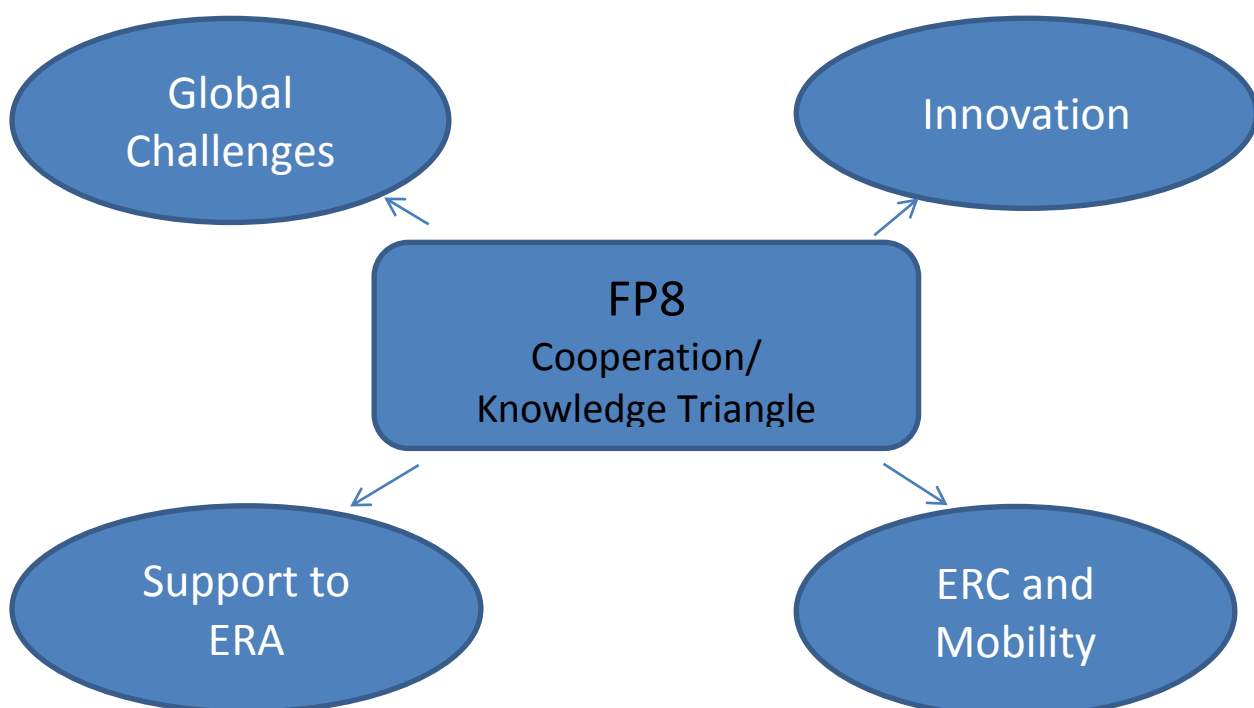
Based on the above, RCN sees a four-legged system as a broad representation of the roles and functions of FP8 as depicted in fig 1. It builds on the core cooperative logic in FP and research in general, and more specifically a reliance on the knowledge triangle between research, business and education:

- 1) *Global Challenges*: The thematic orientation of FP8 will be concentrated to the most important to meet these challenges, such as energy, climate change, food security and a few others. A significant part of the budget should be allocated to this core, and a new, strategic approach to international cooperation should make up a key part of it, inviting other countries and regions in bilateral and multilateral cooperation on a reciprocal basis.

Instruments to stimulate innovation to meet global challenges should be developed and integrated in this approach.

- 2) *Innovation*: The recent communication on the Innovation Union has placed innovation firmly at the heart of EU policy. Further, it should be noted that the FP over the years has contained significant innovation efforts through cooperative projects between enterprises, research institutes and universities. FP8 should embrace both elements in a broad and active strategy for research-based innovation, building on cooperative projects (also small scale), leveraged financing such as through the Risk Sharing Financial Facility (RSFF), EUROSTARS and public-private partnerships, and public technology procurement. Clusters and knowledge communities as envisaged by the European Institute of Technology are highly relevant, as is a better integration of the Community Innovation Programme currently run by DG Enterprise. COST should be included as a networking building block for cooperation.
- 3) *Frontier research and mobility*: The ERC should build on its success and be further strengthened, and with it the mobility, training and support of careers of scientists, including female researchers. Hence the current ERC efforts should be brought together with the Marie Curie activities to ensure a vibrant science system in Europe with a high degree of international attraction. An extension of co-funding schemes with national sources is seen as beneficial.
- 4) *Support to ERA*: The fourth leg of FP8 should be a clear role in moving ERA forward, creating momentum through co-financing significant cooperative efforts among European funding institutions. This concerns in particular joint programmes that have emerged recently to make up 10 qualified proposals, as well as investments in infrastructure where EU level investments represent clear added value. Support to knowledge transfer, research careers and international cooperation should be channeled through the innovation, mobility and global challenges legs respectively.

Fig 1: A proposed functional illustration for FP8





## **Thematic priorities**

The current reflection paper emphasizes that a significant share of the FP8 activities be without thematic priorities, in particular in the ERC and mobility programs as well as cooperative innovation. However, FP8 should build upon the need to focus attention on key priorities both on the global and the European stage. Hence, some thematic priority areas seem evident to propose:

- a) Climate change and policy
- b) Energy security and renewable energy technologies
- c) Food security and life sciences/knowledge based bio-economy
- d) Marine and maritime research
- e) Social sciences to support policy and cohesion
- f) Health



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