

Norway's Preliminary Positions on the next Framework Programme for Research and Innovation ("FP9")

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Abstract

The general objective of the next Framework Programme should be to contribute to a "green shift" and renewal in our economies and societies, with an emphasis on digitalisation, green innovation and blue growth. The programme ought to have a strong global outreach, and should contribute actively to the COP21-targets and the UN Sustainable Development Goals.

Five key *principles* should form the basis for FP9, namely excellence, impact, openness, simplicity and a clear emphasis on European Added Value.

For the *overall role, design and structure* of the next Framework Programme, we emphasise the following:

- Keep the integrated framework for research and innovation, but consider the balance carefully
- Develop a better framework for synergies and division of labour with the national level, based on European Added Value
- Provide for a flexible and learning programme with more possibilities for adjustments in the implementation phase
- Continue supporting the European Research Area and ensure better cooperation between FP9 and the JPIs
- Strengthen interdisciplinary research and aim for more high-risk research and innovation projects
- Continue implementing the three O's both in FP9 and ERA
- Ensure a more comprehensive approach to innovation, encompassing both technological and non-technological innovation

Introduction

As an EEA EFTA country with more than 25 years of participation in the Framework Programme, Norway takes a strong interest in contributing to the process leading up to the next Framework Programme, hereafter referred to as FP9.

Notwithstanding the forthcoming policy process, the full problem definition and the specific and operational objectives to be established for the next Framework Programme, we believe there are some key messages on orientation, principles, role and design that should be taken into account when designing the next programme in order to have a well-functioning programme with high impact.

With the current Horizon 2020 Framework Programme as an important benchmark, this paper presents proposals for FP9 based on consultations with ministries, agencies and Norwegian research and innovation actors engaged in EU research and innovation activities.

We aim at making a further contribution on thematic priorities, instruments and partnerships later in 2017, based on the framework established in this position paper.

An agenda for a "green shift", blue growth and global outreach

Horizon 2020 emphasises growth, jobs and innovation, but also major societal challenges related to sustainability and climate change. In our view, the next Framework Programme should much more actively support a "green shift" and renewal in our societies and economies. Green innovation and competitiveness should have priority, as well as the possibilities associated with digitalisation and blue growth for our societies and economies.

In our view, efforts at strengthening innovation and competitiveness in trade and industry and efforts at securing a "green shift" in the economy are mutually reinforcing. Consequently, having a general objective of securing such a shift will not come at the expense of efforts at strengthening innovation and competitiveness. The "green shift" could imply new possibilities for SMEs, especially when linked to new initiatives for growth and scaling up.

Both the Commission and the OECD have pointed to the great economic potential of the Seas and Oceans, while at the same time underlining the need for sustainability. The Seas and Oceans "... offer great potential for boosting growth, jobs and innovation. The output of the global ocean economy is estimated at EUR 1.3 trillion and this could more than double by 2030"¹. FP9 should help in realizing this potential.

Two important international milestones need to be taken into account: FP9 should contribute actively to the goals in the 2030 UN Agenda for Sustainable Development and the targets agreed at the Paris climate conference (COP21) in December 2015.

The global context is important. Europe is currently facing a range of challenges, which largely are of a global nature, including a changing geopolitical context. Strengthened international cooperation could lead to a common knowledge base that could provide for better international cooperation on a number of challenges, including a deepening of democracy.

To increase relevance to trade and industry, the activities in FP9 should have a clear outlook to global markets.

Key principles for FP9

We welcome a new a Framework Programme based on the following key principles:

- 1) **Excellence:** To strengthen the European knowledge and innovation base further, excellence in research should be a core principle also in the next framework programme. Like Horizon 2020, FP9 must allocate funding to the best projects, based on competitive calls. To this end, it is important that FP9 involves and attracts the best minds and ideas in Europe and globally, irrespective of the country of origin.
- 2) **Impact:** The emphasis on impact in Horizon 2020 has increased the focus on contributions of research to society and the economy both at the European and the national level. FP9 should create even more impact. The understanding of impact should be broad and include both scientific, societal and economic impacts, bearing in mind that not all science or research should or would have immediate impact. Sustainability and green competitiveness should be taken explicitly into account when

¹ JOIN(2016) 49 final: International ocean governance: an agenda for the future of our oceans

evaluating the impact of industry oriented R&I project proposals ("triple bottom line").

- 3) **Openness:** Openness should be a key principle both in FP9 and in further work on the European Research Area, supporting the agenda suggested by Commissioner Moedas to improve on openness in science, innovation and international cooperation (the three O's).
- 4) **Simplicity:** FP9 should be easy to use. Application and reporting procedures have been simplified in Horizon 2020. To ensure the attractiveness of FP9, it should be even more accessible and easy to use from the participants' point of view, especially for newcomers.
- 5) **European Added Value:** FP9 should give added value and impact by focussing on objectives, programme areas and actions that create value beyond what is achievable at the national level. European Added Value should guide choices and priorities in all stages of the design and implementation of the programme, and also be a main element in the evaluations of the programme.

Role, design and structure of FP9

The Framework Programme has an important role to play in European research and innovation. FP9 should further reinforce and strengthen the European science and research base and increase innovation capacity. The three pillars of Horizon 2020 – excellent science, industrial leadership and societal challenges – are good building blocks for FP9.

Keep the integrated framework for research and innovation, but consider the balance

We support an integrated programme for research and innovation.

Horizon 2020 builds on important elements in FP7, notably the European Research Council, the Marie Skłodowska-Curie Actions, ESFRI research infrastructures and collaborative projects. These important initiatives should be given sufficient focus and priority also in the next Framework Programme.

Horizon 2020 also introduced new elements to bring research closer to innovation and to the needs of society and industry. This has resulted in increased involvement of users in the public sector and of companies. We see the emphasis on research-based innovation and user involvement as very positive developments and would like to see a continuation.

FP9 will need to balance the need to retain and increase support to top-level basic and applied research with support to innovation and actions closer to the market. This balance should be carefully considered when designing FP9, taking into account the results of the interim evaluation of Horizon 2020.

A better framework for synergies, division of labour and flexibility

To secure better use of available resources, synergies and division of labour with the national level must be taken into account when designing FP9. The programme should complement, but not substitute, national funding. Resources in the programme should be concentrated on the most important tasks, and not spread thin on many priorities.

There should consequently be fewer priorities in FP9. Priority research and innovation areas should be established based on ex-ante considerations of subsidiarity and where the European Added Value is the highest. This could help avoiding problems with low success rates and

oversubscription, and help to clarify the national responsibility for funding of research and innovation.

Provide for a flexible and learning programme

It is necessary to provide for flexibility and opportunities to adjust course within the agreed priority areas. FP9 should be able to take up new priorities based on feedback mechanisms, learning and new challenges and opportunities.

Work Programme development could assume a larger role under a more flexible framework. The work of the programme committees could focus on new developments, implementation, impacts and results, as well as on synergies and division of labour with the national level.

Within such a framework, we welcome a continuation of challenge-based, non-prescriptive calls. In addition, we urge for more bottom-up opportunities also within collaborative research. This will allow for more and unforeseen ideas from the actors themselves and give more freedom in choice of approaches and methods.

Continue supporting the European Research Area and ensure better cooperation in the area of societal challenges

The European Research Area (ERA) as an "Open space for knowledge and growth" is a strong point for Europe. From a national perspective, ERA strengthens the national research systems by providing increased opportunities for cooperation and competition. ERA will need further efforts after 2020, and should be supported by FP9. Areas that need further attention include research infrastructures, gender and open science and innovation.

There is a need for better coordination in the area of societal challenges, which in all likelihood will be high on the agenda also after 2020. A transparent process is required to establish the societal challenges that FP9 will address, in close dialogue with Member States, Associated Countries and the High Level Group on Joint Programming (GPC).

Pending an adequate follow-up of the JPI evaluation by the JPIs themselves, FP9 should provide sufficient and flexible support for the Joint Programming Initiatives, alongside increased national commitments. Cooperation between the relevant programme committees in FP9 and the steering structures of the JPI's should be strengthened, based on an open and transparent dialogue. This could increase impact and secure a sound division of labour.

Increased user involvement within the societal challenges pillar has been a positive development in Horizon 2020, and should be continued.

Strengthen the focus on interdisciplinary research and aim for more high risk, mission oriented R&I projects

A further strengthening of interdisciplinary research in FP9 is important, including better integration of the social sciences and humanities in collaborative research. Societal values and perspectives need to be reflected in the research and innovation activities.

Compared with national funding, the Framework Programme can take higher risks and support more cross-country collaboration. Given this, FP9 should fund mission oriented, breakthrough research and innovation and technology projects similar to the programmes of DARPA (Defense Advanced Research Projects Agency in the US). This could be based on a portfolio approach with a sound proportion of high risk, applied projects that could lead to

high gains. Boldness in project proposals should be an explicit assessment/evaluation criterion.

Continue implementing the three O's

We welcome the three O's – Open Innovation, Open Science and Open to the World. We would like to see them further implemented in the next Framework Programme, and in the European Research Area.

Integrate the Open Science Agenda

We attach great importance to the transition to new ways of conducting science and to new modes of collaboration, including with digital technologies. FP9 should reinforce this development.

Norway supports the Council conclusions of 27 May 2016 on the transition towards an Open Science system, including immediate Open Access as the default by 2020. The next Framework Programme should have Open Access to both publications and data as default principles, with adequate opt-outs.

The link to Open Innovation is important. FP9 will need instruments that make use of the possibilities opening up through Open Science, including in register research, innovation and commercialisation.

A strong push for international cooperation

FP9 should be Open to the World and be an attractive arena for international R&I-cooperation for excellent researchers and innovators from all countries. International cooperation in research and innovation is important for quality in research, for innovation and for exports and trade. A strategy for international cooperation should be built into the programme from the start, and not be an add-on. In order to ensure excellent international projects, we propose that FP9 introduces new or adjusted measures to promote international cooperation. There may be a need for more flexible funding rules for participation. The focus should be to ensure high-quality, high-impact projects with international partners.

A more comprehensive approach to innovation

In order to have a dynamic programme that could help realizing the European potential after 2020, FP9 should be based on a broad and comprehensive approach to innovation, going beyond technological innovation and including fostering innovation to address societal challenges. FP9 should have instruments specifically dedicated to innovation and include innovation activities that do not originate in research. Innovation in services should be included to maximise the innovation potential.

We welcome actions to support the scaling up of innovative SMEs and to test actions that could lead to new business models and the creation of new markets, i.e. under the umbrella of a European Innovation Council. Shorter project cycles and shorter time to market should be emphasised in activities targeting SMEs. Expected revenue and market-based selection mechanisms should be emphasised when financing innovation. European Added Value should be particularly emphasised in the design and implementation of the instruments dedicated to innovation.

FP9 should primarily be based on direct financial contributions in the form of grants in support of projects. Financial instruments cannot substitute for grants in support of research

and innovation activities, but do have a role to play in innovation, commercialization, market introduction and growth. Care should be taken before expanding loan-based financing further.

It is important that financial instruments in the next Framework Programme are directed at areas where both market failure and European added value are most prominent. Early stage financing for innovative SMEs/small MidCaps, thematic areas and growth finance should be emphasised.

Interplay and synergies in the whole knowledge triangle should be strengthened in the next programme period on the basis of the new programs in research, innovation and education. This could increase the contribution of higher education and public research institutions to innovation and economic growth. There should be a special focus on entrepreneurship, including the need to foster an even stronger entrepreneurship culture in Europe.