

CONSULTATION OF THE HORIZON 2020 SOCIETAL CHALLENGE 5 STAKEHOLDERS

PROVIDING ADVICE ON POTENTIAL PRIORITIES FOR RESEARCH AND INNOVATION IN THE WORK PROGRAMME 2016-2017

The objective of the **Horizon 2020 Societal Challenge 5** (SC5) “Climate action, environment, resource efficiency and raw materials” is “to achieve a resource – and water – efficient and climate change resilient economy and society, the protection and sustainable management of natural resources and ecosystems, and a sustainable supply and use of raw materials, in order to meet the needs of a growing global population within the sustainable limits of the planet's natural resources and eco-systems.”

SC5 focuses on the following 6 broad areas that need to be tackled:

- fighting and adapting to climate change;
- sustainably managing natural resources and ecosystems
- sustainable supply of non-energy and non-agricultural raw materials;
- transition towards a green economy through eco-innovation;
- global environmental observation and information systems;
- cultural heritage.

1. Introduction

This paper provides the basis for the consultation of SC5 stakeholders concerning potential priorities for EU research and innovation funding in the work programme 2016-2017.

The Horizon 2020 Specific Programme sets the scope and content for the implementation of the Framework Programme for research and innovation (2014-2020). Providing the legal base as politically agreed with the Member States and the European Parliament, it determines the specific objectives for Union support to the research and innovation activities for each Horizon 2020 challenge/part. On this basis, the Commission services prepare multiannual work programmes of which the first Horizon 2020 work programme covering 2014-2015 was adopted on 10 December 2013.

The preparation of the work programme 2016-2017 first includes a consultation with the stakeholder community, in particular through the Advisory Groups on the basis of a series of questions (provided in Part 4 of this document). Other main stakeholders such as European Technology Platforms, European Innovation Partnerships, Joint Programming Initiatives, contractual Public-Private Partnerships and other representatives from professional organisations and civil society will be consulted in parallel. An exchange with the Member States will take place in the second part of the year. The Commission expects, on the basis of the priorities identified through these consultation processes, to then develop the content of the work programme 2016-2017 in first half of 2015 with the adoption and publication of the calls for proposals not earlier than summer 2015.

The Horizon 2020 work programme comprises 18 sections, which set out the funding opportunities under the different parts of the programme. Each part is self-contained, and describes the overall objectives, the respective calls, and the topics within each call. The Horizon 2020 work programme is complemented by the separate work programmes for the European Research Council, Euratom, the Joint Research Centre, the strategic Innovation Agenda for the European Institute of Innovation and technology (EIT), as well as the Innovation Investment Package, still subject to inter-institutional negotiations, containing the Article 187 Joint Technology Initiatives with industry and Article 185 Public-Public Partnerships with Member States.

2. Key strategic considerations for strengthening the added value of EU actions

With its emphasis on addressing societal challenges and key technologies, covering the full research and innovation cycle, facilitating collaborative and industry-driven research, reducing time to market and further strengthening excellence, Horizon 2020 provides powerful opportunities to develop new knowledge and innovative products and services, creating growth and jobs in Europe.

The thematic content of the Specific Programme has to be translated into work programmes that deliver on these goals, making full use of the European added value that transnational collaboration can deliver. However, prioritisation is needed as everything cannot be done at once, and the implementation of activities needs to be optimised.

This consultation is about helping to identify the potential areas and actions which could be rolled-out in the next work programme, taking into account such aspects as societal change, ageing population, big data, globalisation, resource constraints, and environmental concerns; mobilising resources to build scale and critical mass; exploiting well-developed research and innovation agendas; and securing world class scientific and innovative breakthroughs.

Concerning the first Horizon 2020 work programme 2014-2015, the overriding priorities are to boost competitiveness and support the creation of jobs and new sources of growth. A strong emphasis is placed on addressing societal challenges with high potential for sustainable competitiveness, innovation and growth. Thus reflecting the strong challenge-based approach of Horizon 2020, inviting applicants to come up with innovative solutions and attracting more multi-disciplinary and multi-sectoral proposals.

3. Context of consultation

Delivering on the Europe 2020 objectives of smart, sustainable and inclusive growth depends on research and innovation as key facilitators of social and economic prosperity and of environmental sustainability. Linking EU research and innovation closer to policy objectives sets the framework and specific objectives to which Horizon 2020 research and innovation funding should contribute, such as the Europe 2020 Strategy, the Innovation Union and other flagship initiatives. In pursuit of the smart, sustainable and inclusive growth strategy, the

recently adopted Commission communication provides a stock taking of the Europe 2020 strategy¹.

The general objective of Horizon 2020 will be pursued through three priorities dedicated to generating excellent science, creating industrial leadership, and tackling societal challenges. While the Specific Programme defines the specific objectives and rules for implementation for the duration of the framework programme, it does not define how these objectives are translated into specific actions, nor the sequence of roll-out of the actions. In particular taking into account, how to optimise the specific actions in view of the broader and horizontal objectives, i.e., its contribution to growth and jobs, the European added value and their framing in the context of research performed at Member States and international level.

This paper serves as a common basis for stakeholders to provide advice on the potential strategic considerations (i.e., priorities) for the research and innovation activities in the work programme 2016-2017.

4. Questions

Building on the first Horizon 2020 work programme 2014-2015, this consultation will provide a more strategic approach to work programme preparations. This will enable a more integrated approach, particularly important for areas that cut across different Horizon 2020 parts and for linking key enabling technologies to their application in addressing societal challenges and vice versa.

On the basis of this paper and its accompanying annexes, the questions below are the key aspects to be considered in terms of providing input towards the priority setting for EU research and innovation funding in the work programme 2016-2017.

The questions to be considered by stakeholders, in what concerns their areas of expertise, are set out in the following box.

¹ COM(2014) 130 final

Please consider the following questions, citing any available evidence such as foresight and other assessments of research and innovation trends and market opportunities:

- 1) What is the biggest challenge in the field concerned which requires immediate action under the next Work Programme? Which related innovation aspects could reach market deployment within 5-7 years?
- 2) What are the key assumptions underpinning the development of these areas (research & innovation, demand side and consumer behaviour, citizens' and civil society's concerns and expectations)?
- 3) What is the output that could be foreseen, what could the impact be, what would success look like, and what are the opportunities for international linkages?
- 4) Which are the bottlenecks in addressing these areas, and what are the inherent risks and uncertainties, and how could these be addressed?
- 5) Which gaps (science and technology, markets, policy) and potential game changers, including the role of the public sector in accelerating changes, need to be taken into account?
- 6) In which areas is the strongest potential to leverage the EU knowledge base for innovation and, in particular, ensure the participation of industry and SMEs? What is the best balance between bottom-up activities and support to key industrial roadmaps?
- 7) Which areas have the most potential to support integrated activities, in particular across the societal challenges and applying key enabling technologies in the societal challenges and vice versa; and cross-cutting activities such as social sciences and humanities, responsible research and innovation including gender aspects, and climate and sustainable development? Which types of interdisciplinary activities will be supported?