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THE EUROPEAN UNION**

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**NOTE**

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**From:** Presidency

**To:** Delegations

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**Subject:** Proposal for a Council decision establishing the Specific Programme  
implementing Horizon 2020 - The Framework Programme for Research and  
Innovation (2014-2020)  
- Presidency text (Articles, Annex I - Common Elements for the Indirect Actions  
and Annex II - Performance Indicators)

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Delegations will find attached a Presidency text on the Proposal for a Council decision establishing the Specific Programme implementing Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020) on Articles (pages 9-18), Annex I (Common elements for the indirect actions, pages 19-25), and Annex II (Performance indicators, pages 90-92) of the Commission proposal (17935/11).

Explanation: ~~Strikeout~~ = deletion in relation to Presidency text (ST14992/12); **Bold underlined** = new text

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Proposal for a  
**COUNCIL DECISION**  
**establishing the Specific Programme Implementing Horizon 2020 - The Framework  
Programme for Research and Innovation (2014-2020)**  
(text with EEA relevance)

**TITLE I**  
**ESTABLISHMENT**

*Article 1*  
*Subject matter*

This Decision establishes the specific programme implementing Regulation (EU) No XX/2012 of the European Parliament and of the Council<sup>1</sup> and determines the specific objectives for Union support to the research and innovation activities set out in Article 1 of that Regulation as well as the rules for implementation.

*Article 2*  
*Establishment of the Specific Programme*

1. The specific programme implementing Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020) ('the specific programme') is hereby established for the period from 1 January 2014 to 31 December 2020.
2. In accordance with Article 5(2) and 5(3) of Regulation (EU) No XX/2012 [Horizon 2020], the specific programme shall consist of the following Parts:
  - (a) Part I 'Excellent science';
  - (b) Part II 'Industrial leadership';
  - (c) Part III 'Societal challenges';
  - (d) Part IV 'Non-nuclear direct actions of the Joint Research Centre (JRC)'.

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<sup>1</sup> OJ L [], [], p. []

*Article 3*  
*Specific objectives*

1. Part I 'Excellent science' shall strengthen the excellence of European research in accordance with the priority "Excellent science" set out in Article 5(2)(a) of Regulation (EU) No XX/2012 [Horizon 2020] by pursuing the following specific objectives:
  - (a) strengthening frontier research, through the activities of the European Research Council (ERC);
  - (b) strengthening research in Future and Emerging Technologies;
  - (c) strengthening skills, training and career development, through the Marie Skłodowska-Curie actions ("Marie Skłodowska-Curie actions");
  - (d) strengthening European research infrastructures, including e-infrastructures.

The broad lines of the activities for those specific objectives are set out in Part I of Annex I.

2. Part II 'Industrial leadership' shall strengthen industrial leadership and competitiveness in accordance with the priority 'Industrial leadership' set out in Article 5(2)(b) of Regulation (EU) No XX/2012 [Horizon 2020] by pursuing the following specific objectives:
  - (a) boosting Europe's industrial leadership through research, technological development, demonstration and innovation in the following enabling and industrial technologies:
    - (i) information and communication technologies;
    - (ii) nanotechnologies;
    - (iii) advanced materials;
    - (iv) biotechnology;
    - (v) advanced manufacturing and processing;
    - (vi) space;

- (b) enhancing access to risk finance for investing in research and innovation;
- (c) increasing innovation in small and medium-sized enterprises.

The broad lines of the activities for those specific objectives are set out in Part II of Annex I. There shall be specific conditions for use of finance facilities under the specific objective in point (b). Those conditions are set out in Point 2 of Part II of Annex I.

The Commission shall be empowered to adopt delegated acts in accordance with Article 10 **concerning the modifications of the share of investment from the Equity Facility of Horizon 2020 of the total EU investment in expansion and growth-stage investments regarding the financial instruments referred to in Point 2 of Part II of Annex I**, ~~for the purpose of adapting those specific conditions if economic market conditions so require or according to the results achieved by the Competitiveness and Innovation Programme Loan Guarantee Facility and the Risk Sharing Instrument of the Seventh Framework Programme Risk Sharing Financial Facility.~~

3. Part III 'Societal challenges' shall contribute to the priority 'Societal challenges' set out in Article 5(2)(c) of Regulation (EU) No XX/2012 [Horizon 2020] by pursuing research, technological development, demonstration and innovation actions which contribute to the following specific objectives:
  - (a) improving the lifelong health and wellbeing;
  - (b) securing sufficient supplies of safe, healthy and high quality food and other bio-based products, by developing productive, sustainable and resource-efficient primary production systems, fostering related ecosystem services and the recovery of biological diversity, along side competitive and low carbon supply, processing and marketing chains;

- (c) making the transition to a reliable, publicly accepted, sustainable and competitive energy system, aiming at reducing fossil fuel dependency in the face of increasingly scarce resources, increasing energy needs and climate change;
- (d) achieving a European transport system that is resource-efficient, environmentally-friendly, safe and seamless for the benefit of citizens, the economy and society;
- (e) achieving a resource -and water- efficient and climate change resilient economy and society, protection of the environment and a sustainable supply 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;
- (f) fostering a greater understanding of Europe, provide solutions and support inclusive, innovative and reflective European societies in a context of unprecedented transformations and growing global interdependencies;
- (g) fostering secure European societies in a context of unprecedented transformations and growing global interdependencies and threats, while strengthening the European culture of freedom and justice.

The broad lines of the activities for those specific objectives are set out in Part III of Annex I.

4. Part IV 'Non-nuclear direct actions of the Joint Research Centre' shall contribute to all of the priorities set out in Article 5(2) of Regulation (EU) No XX/2012 [Horizon 2020] with the specific objective of providing customer-driven scientific and technical support to Union policies.

The broad lines of that specific objective are set out in Part IV of Annex I.

5. The specific programme shall be assessed in relation to results and impact as measured against performance indicators, ~~including, where appropriate, publications in high impact journals, the circulation of researchers, the accessibility of research infrastructures, investments mobilised via debt financing and venture capital, SMEs and businesses introducing innovations new to the company or the market, references to relevant research activities in policy documents as well as occurrences of specific impacts on policies.~~

Further detail on the key performance indicators which correspond to the specific objectives set out in paragraphs 1 to 4 of this Article are set out in Annex II.

The Commission shall be empowered to adopt delegated acts in accordance with Article 10 **concerning modifications of or additions to the indicators where those indicators could help measure the progress in achieving the Programme's general and specific objectives.**  
~~for the purpose of adapting those indicators in view of new developments or further elaborating them.~~

*[Article 4*

*Budget*

1. In accordance with Article 6(1) of Regulation (EU) No XX/2012 [Horizon 2020], the financial envelope for the implementation of the specific programme shall be [EUR 86198 million].
2. The amount referred to in paragraph 1 shall be distributed among the four Parts set out in Article 2(2) of this Decision in accordance with Article 6(2) of Regulation (EU) No XX/2012 [Horizon 2020]. The indicative budgetary breakdown for the specific objectives set out in Article 3 of this Decision and the maximum overall amount of the contribution to the actions of the Joint Research Centre are set out in Annex II to Regulation (EU) No XX/2012 [Horizon 2020].

- 3 No more than 6 % of the amounts referred to in Article 6(2) of Regulation (EU) No XX/2012 [Horizon 2020] for the Parts I, II and III of the specific programme shall be for the Commission's administrative expenditure.
4. Where necessary, appropriations may be entered in the budget beyond 2020 to cover technical and administrative expenses, in order to enable the management of activities not yet completed by 31 December 2020.]



## TITLE II IMPLEMENTATION

### *Article 5*

#### *Work programmes*

1. The specific programme shall be implemented by work programmes.
2. The Commission shall adopt common or separate work programmes for the implementation of the Parts I, II and III of this specific programme referred to in points (a), (b) and (c) of Article 2(2), except for the implementation of the actions under the specific objective 'Strengthening frontier research, through the activities of the European Research Council' **referred to in point (a) of Article 3(1)**. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 9(2).
3. The work programmes for the implementation of the actions under the specific objective 'Strengthening frontier research, through the activities of the European Research Council' as established by the Scientific Council of the European Research Council under Article 7(2)(b), shall be adopted by the Commission, by means of an implementing act, **in accordance with the advisory procedure referred to in Article 9(2a)**. The Commission shall depart from the work programme established by the Scientific Council only when it considers that it is not in accordance with the provisions of this Decision. In that case, the Commission shall adopt the work programme by means of an implementing act in accordance with the examination procedure referred to in Article 9(2). The Commission shall duly motivate this measure.
4. The Commission shall adopt a separate multi-annual work programme, by means of an implementing act, for Part IV of the specific programme concerning the non-nuclear direct actions of the Joint Research Centre referred to in point (d) of Article 2(2).

This work programme shall take into account the opinion provided by the Board of Governors of the Joint Research Centre referred to in Decision 96/282/Euratom.

5. The work programmes shall take account of the state of science, technology and, innovation at national, Union and international level and of relevant policy, market and societal developments. They shall contain, where appropriate, information on coordination with research and innovation activities carried out by Member States, including in areas where there are joint programming initiatives. They shall be updated where appropriate.
6. The work programmes for the implementation of the Parts I, II and III referred to in points (a), (b) and (c) of Article 2(2) shall set out the objectives pursued, the expected results, the method of implementation and their total amount, including indicative information on the amount of climate related expenditure, where appropriate. They shall also contain a description of the actions to be financed, an indication of the amount allocated to each action, an indicative implementation timetable, as well as a multi-annual approach and strategic orientations for the following years of implementation. They shall include for grants the priorities, the essential evaluation criteria and the relative weight of the different evaluation criteria and the maximum rate of funding of the total eligible costs. They shall allow for bottom-up approaches that address the objectives in innovative ways.

In addition, those work programmes shall contain a section which identifies the cross-cutting actions as referred to in Article 13 and in the box of cross-cutting issues and support measures in Annex I of Regulation (EU) No XX/2012 [Horizon 2020], across two or more specific objectives both within the same priority and across two or more priorities. Those actions shall be implemented in an integrated manner.

**7. The Commission shall adopt, by means of implementing acts, in accordance with the examination procedure referred to in Article 9(2) the following measures:**

- (a) the decision on the approval of the funding of actions, with the exception of actions under the specific objective 'Strengthening frontier research, through the activities of the European Research Council';**
- (b) the drawing up of the terms of reference for the evaluations provided for in Article 26 of the Regulation (EU) No XX/2012 [Horizon 2020].**

*Article 6*

*European Research Council*

1. The Commission shall establish a European Research Council (“ERC”), which shall be the means of implementing the actions under the Part I 'Excellent science' which relate to the specific objective 'Strengthening frontier research, through the activities of the European Research Council'. The European Research Council shall succeed the European Research Council set up by Decision 2007/134/EC.
2. The European Research Council shall be composed of the independent Scientific Council provided for in Article 7 and the dedicated implementation structure provided for in Article 8.
3. The ERC shall have a President, who shall be chosen from among senior and internationally respected scientists.

The President shall be appointed by the Commission following a recruitment process involving a dedicated search committee, for a term of office limited to four years, renewable once. The recruitment process and the candidate selected shall have the approval of the Scientific Council.

The President shall chair the Scientific Council and shall ensure its leadership and liaison with the dedicated implementation structure, and represent it in the world of science.

4. The European Research Council shall operate according to the principles of scientific excellence, autonomy, efficiency, effectiveness, transparency and accountability. It shall ensure continuity with European Research Council actions conducted under Council Decision 2006/972/EC.
5. The activities of the European Research Council shall support research carried out across all fields by individual and transnational teams in competition at the European level. European Research Council frontier research grants shall be awarded on the sole criterion of excellence.
6. The Commission shall act as the guarantor of the autonomy and integrity of the European Research Council and shall ensure the proper execution of the tasks entrusted to it.

The Commission shall ensure that the implementation of the European Research Council actions is in accordance with the principles set out in paragraph 4 of this Article as well as with the overall strategy of the Scientific Council referred to in Article 7(2).

#### *Article 7*

#### *Scientific Council*

1. The Scientific Council shall be composed of scientists, engineers and scholars of the highest repute and appropriate expertise, ensuring a diversity of research areas and acting in their personal capacity, independent of extraneous interests.

The members of the Scientific Council shall be appointed by the Commission, following an independent and transparent procedure for their identification agreed with the Scientific Council, including a consultation of the scientific community and a report to the European Parliament and Council.

Their term of office shall be limited to four years, renewable once, on the basis of a rotating system which shall ensure the continuity of the work of the Scientific Council.

2. The Scientific Council shall establish:

- (a) the overall strategy for the European Research Council;
- (b) the work programme for the implementation of the European Research Council activities;
- (c) the methods and procedures for peer review and proposal evaluation on the basis of which the proposals to be funded are determined;
- (d) its position on any matter which from a scientific and perspective may enhance achievements and impact of the European Research Council, and the quality of the research carried out;
- (e) a code of conduct addressing, inter alia, the avoidance of conflict of interests.

The Commission shall depart from the positions established by the Scientific Council in accordance with points (a), (c), (d), and (e) of the first subparagraph only when it considers that the provisions of this Decision have not been respected. In that case, the Commission shall adopt measures to maintain continuity in the implementation of the specific programme and the achievements of its objectives, setting out the points of departure from the Scientific Council positions and duly motivating them.

3. The Scientific Council shall act in accordance with the mandate set out in point 1.1, Part I of Annex I.

4. The Scientific Council shall act exclusively in the interest of achieving the objectives of the part of the specific programme relating to the specific objective 'Strengthening frontier research, through the activities of the European Research Council' according to the principles set out in Article 6(4). It shall act with integrity and probity and shall carry out its work efficiently and with the greatest possible transparency.

#### *Article 8*

##### *Dedicated implementation structure*

1. The dedicated implementation structure shall be responsible for the administrative implementation and programme execution, as described in point 1.2 of Part I of Annex I and shall support the Scientific Council in the conduct of all of its tasks.
2. The Commission shall ensure that the dedicated implementation structure follows strictly, efficiently and with the necessary flexibility the objectives and requirements of the European Research Council alone.

TITLE III  
FINAL PROVISIONS

Article 8a

Monitoring and information on implementation

1. The Commission shall annually monitor the implementation of Horizon 2020 in accordance with article 25 of Regulation (EU) No XX/2012 [Horizon 2020] and Annex III of this Decision.
2. The Commission shall regularly inform the Committee referred to in article 9 of the overall progress of the implementation of the indirect actions of the specific programme, and shall provide it with timely information on all actions proposed or funded under Horizon 2020 as specified in Annex IV of this Decision.

*Article 9*

*Committee procedure*

1. The Commission shall be assisted by a Committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011<sup>2</sup>.
- 1a. The Committee shall meet in specific configurations. Where appropriate, the Committee shall meet in horizontal configurations, taking into account the interdisciplinary and cross-cutting nature of Horizon 2020.
2. Where reference is made to this paragraph, the examination procedure in accordance with Article 5 of Regulation (EU) No 182/2011 shall apply.
- 2a. Where reference is made to this paragraph, the advisory procedure in accordance with Article 4 of Regulation (EU) No 182/2011 shall apply.

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<sup>2</sup> OJ L 55, 28.2.2011, p. 13.

3. Where the opinion of the committee referred to in paragraphs 2 **and 2a** is to be obtained by written procedure, that procedure shall be terminated without result when, within the time-limit for delivery of the opinion, the chair of the committee so decides or a simple majority of committee members so request.

*Article 10*

*Exercise of the delegation*

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.
2. The power to adopt delegated acts shall be conferred on the Commission ~~for an indeterminate period of time~~ from the entry into force of this Decision **and for the duration of the Programme.**
3. The delegation of power may be revoked at any time by the Council. A decision of revocation shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the Official Journal of the European Union or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.
4. As soon as it adopts a delegated act, the Commission shall notify it to the Council.
5. A delegated act shall enter into force only if no objection has been expressed by the Council within a period of two months of notification of that act to the Council or if, before the expiry of that period, the Council has informed the Commission that it will not object. That period shall be extended by one month at the initiative of the Council.



6. The European Parliament shall be informed of the adoption of delegated acts by the Commission, or any objection formulated to them, or of the revocation of the delegation of powers by the Council.

#### *Article 11*

##### *Repeal and transitional provisions*

1. Decisions 2006/971/EC, 2006/972/EC, 2006/973/EC, 2006/974/EC and 2006/975/EC are repealed with effect from 1 January 2014.
2. However, actions initiated under Decisions referred to in paragraph 1 and financial obligations related to actions pursued under those Decisions shall continue to be governed by those Decisions until their completion. Where necessary, any remaining tasks of the Committees established by the Decisions referred to in paragraph 1 shall be undertaken by the Committee referred to in Article 9 of this Decision.
3. The financial allocation for the specific programme may also cover technical and administrative assistance expenses necessary to ensure the transition between the specific programme and the measures covered by Decisions 2006/971/EC, 2006/972/EC, 2006/973/EC, 2006/974/EC and 2006/975/EC.

#### *Article 12*

##### *Entry into force*

This Decision shall enter into force on the third day following that of its publication in the *Official Journal of the European Union*.

*Article 13*

This Decision is addressed to the Member States.

Done at Brussels,

For the Council

The President

## ANNEX I

### Broad lines of the activities Common elements for the indirect actions

#### 1. PROGRAMMING

##### 1.1. General

Regulation (EU) No XX/2012 (Horizon 2020) provides a set of principles in order to foster a programmatic approach whereby activities contribute in a strategic and integrated way to its objectives and in order to ensure strong complementarities with other related policies and programmes across the Union.

The indirect actions of Horizon 2020 will be implemented through the forms of funding provided for in the Financial Regulation, in particular grants, prizes, procurement and financial instruments. All forms of funding will be used in a flexible manner across all of Horizon 2020's general and specific objectives, with their use being determined on the basis of the needs and the specificities of the particular specific objective.

Particular attention will be paid to ensuring a ~~broad~~ **balanced** approach to **research and** innovation, which is not only limited to the development of new products and services on the basis of scientific and technological breakthroughs, but which also incorporates aspects such as the use of existing technologies in novel applications, continuous improvement, non-technological and social innovation. Only a holistic approach to innovation can at the same time tackle societal challenges and give rise to new competitive businesses and industries.

For the societal challenges and the enabling and industrial technologies in particular, there will be a particular emphasis on research **and innovation** activities complemented with ~~supporting~~ activities which operate close to the end-users and the market, such as demonstration, piloting or proof-of-concept. This will also include, where appropriate, activities in support of social innovation, and support to demand side approaches such as pre-standardisation or pre-commercial procurement, procurement of innovative solutions, standardisation and other user-centered measures to help accelerate the deployment and diffusion of innovative products and services into the market. In addition, there will be sufficient room for bottom-up approaches and open, light and fast schemes under each of the challenges and technologies to provide Europe's best researchers, entrepreneurs and enterprises with the opportunity to put forward breakthrough solutions of their choice.

Detailed priority setting during implementation of Horizon 2020 will entail a strategic approach to programming of research, using modes of governance aligning closely with policy development yet cutting across the boundaries of traditional sectoral policies. This will be based on sound evidence, analysis and foresight, with progress measured against a robust set of performance indicators. This cross-cutting approach to programming and governance will allow effective coordination between all of Horizon 2020's specific objectives and will allow to address challenges which cut across them, such as for instance sustainability, climate change, **social sciences and humanities** or marine sciences and technologies.

Priority setting will equally be based on a wide range of inputs and advice. It will include, where appropriate, groups of independent experts set up specifically to advise on the implementation of Horizon 2020 or any of its specific objectives. These experts group shall show the appropriate level of expertise and knowledge in the covered areas and a variety of professional backgrounds, including **academia**, industry and civil society involvement. Advice on the identification and design of strategic priorities by the European Research Area Committee (ERAC), other ERA-related Groups and the Enterprise Policy Group (EPG) shall, where appropriate, also be taken into consideration.

Priority setting may also take into account the strategic research agendas of European Technology Platforms, Joint Programming Initiatives or inputs from the European Innovation Partnerships. Where appropriate, public-public partnerships and public-private partnerships supported through Horizon 2020 will also contribute to the priority setting process and to the implementation, in line with the provisions laid down in Horizon 2020. Regular interactions with end-users, citizens and civil society organisations, through appropriate methodologies such as consensus conferences, participatory technology assessments or direct engagement in research and innovation processes, will also be a cornerstone of the priority setting process.

As Horizon 2020 is a programme for seven years, the economic, societal and policy context in which it will operate may change significantly during its life-time. Horizon 2020 needs to be able to adapt to these changes. Under each of the specific objectives, there will therefore be the possibility to include support for activities beyond the descriptions set out below, where this is duly justified to address major developments, policy needs or unforeseen events.

## 1.2. Access to risk finance

Horizon 2020 will help companies and other types of organisation gain access to loans, guarantees and equity finance via two facilities.

The debt facility will provide loans to single beneficiaries for investment in research and innovation; guarantees to financial **intermediaries** ~~beneficiaries~~ making loans to beneficiaries; combinations of loans and guarantees, and guarantees or counter-guarantees for national and regional debt-financing schemes. It will include an SME window targeting R&I-driven SMEs with loan amounts that complement finance to SMEs by the Loan Guarantee Facility under the Programme for the Competitiveness of Enterprises and SMEs.

The equity facility will provide venture and/or mezzanine capital to individual enterprises in the early stage (start-up window). The facility will also have the possibility to make expansion and growth-stage investments in conjunction with the Equity Facility for Growth under the Programme for the Competitiveness of Enterprises and SMEs, including in funds-of-funds.

These facilities will be central to the specific objective 'Access to risk finance' but may, where relevant, also be used across all other specific objectives of Horizon 2020.

The equity facility and the SME window of the debt facility will be implemented as part of two EU Financial Instruments that provide equity and debt to support SMEs' R&I and growth, in conjunction with the equity and debt facilities under the Programme for the Competitiveness of Enterprises and and SMEs **(COSME)**.

### 1.3. Communication and dissemination

A key added value of research and innovation funded at the Union level is the possibility to disseminate and communicate results on a continent wide scale to enhance their impact. Horizon 2020 will therefore include, under all of its specific objectives, dedicated support to dissemination (including through open access to scientific publications), communication and dialogue actions, with a strong emphasis on communicating results to end-users, citizens, **academia**, civil society organisations, industry and policy makers. To this extent, Horizon 2020 may make use of networks for information transfer. Communication activities undertaken in the context of Horizon 2020 will promote the fact that the results were obtained with the support of Union funding and will also seek to raise public awareness on the importance of research and innovation by means of publications, events, knowledge repositories, databases, websites or a targeted use of social media.

## 2. COMPLEMENTARITIES AND CROSS-CUTTING ISSUES AND SUPPORT MEASURES

Horizon 2020 is structured around the objectives defined for its three major parts: generating excellent science, creating industrial leadership and tackling societal challenges. Particular attention will be paid to ensuring adequate coordination between these parts and fully exploiting the synergies generated between all specific objectives to maximise their combined impact on the higher level policy objectives of the Union. The objectives of Horizon 2020 will therefore be addressed through a strong emphasis on finding efficient solutions, going well beyond an approach based simply on traditional scientific and technological disciplines and economic sectors.

Cross-cutting actions will be promoted across ~~between~~ Part I 'Excellent Science', Part II 'Industrial Leadership' and Part III 'Societal eChallenges' to develop jointly new knowledge, future and emerging technologies, research infrastructures and key competences. Research infrastructures will also be leveraged for broader usage in society, for example in public services, promotion of science, civil security and culture. Furthermore, priority setting during implementation for the direct actions of the Joint Research Centre and the activities of the European Institute of Innovation and Technology (EIT) will be adequately coordinated with the other parts of Horizon 2020.

Furthermore, in many cases, contributing effectively to the objectives of Europe 2020 and the Innovation Union will require solutions to be developed which are interdisciplinary in nature and therefore cut across multiple specific objectives of Horizon 2020. Horizon 2020 includes specific provisions to incentivise such cross-cutting actions, including by an efficient bundling of budgets. This includes also for instance the possibility for the societal challenges and enabling and industrial technologies to make use of the provisions for financial instruments and the dedicated SME instrument.



Cross-cutting actions will also be vital in stimulating the interactions between the societal challenges and the enabling and industrial technologies needed to generate major technological breakthroughs. Examples of where such interactions may be developed are: the domain of eHealth, smart grids, intelligent transport systems, mainstreaming of climate actions, nanomedicine, advanced materials for lightweight vehicles or the development of bio-based industrial processes and products. Strong synergies will therefore be fostered between the societal challenges and the development of generic enabling and industrial technologies. This will be explicitly taken into account in developing the multi-annual strategies and the priority setting for each of these specific objectives. It will require that stakeholders representing the different perspectives are fully involved in the implementation and in many cases, it will also require actions which bring together funding from the enabling and industrial technologies and the societal challenges concerned.

Particular attention will also be paid to the coordination of activities funded through Horizon 2020 with those supported under other Union funding programmes, such as the Common Agricultural Policy, **Life+**, the Common Fisheries Policy or the Erasmus For All: the Union's programme for Education, Training, Youth and Sport or the Health for Growth Programme and the Union's external and development policies **funding programmes**. This includes an appropriate articulation with the Cohesion policy funds **in the context of national and regional R&I strategies for smart specialisation**, where support to capacity building for research and innovation at regional level may act as a 'stairway to excellence', the establishment of regional centres of excellence may help close the innovation divide in Europe or support to large-scale demonstration and pilot line projects may aid in achieving the objective of generating industrial leadership in Europe.

## A. Social sciences and humanities

Social sciences and humanities research will be fully integrated into each of the general objectives of Horizon 2020. This will include ample opportunities for supporting such research through the European Research Council, the Marie Skłodowska-Curie actions or the Research Infrastructures specific objective.

**To this end,** Social sciences and humanities **will also be mainstreamed as** are an essential element of the activities needed to enhance industrial leadership and to tackle each of the societal challenges. For the latter, this includes: understanding the determinants of health and optimising the effectiveness of healthcare provisions, support to policies empowering rural areas and promoting informed consumer choices, robust decision making on energy policy and in ensuring a consumer friendly European electricity grid and a transition to a sustainable energy system, supporting evidence based transport policy and foresight, support to climate change mitigation and adaptation strategies, resource efficiency initiatives and measures towards a green and sustainable economy, and cultural and socio-economic aspects of security, risk and management issues (including legal and human rights aspects).

In addition, the specific objective 'Europe in a changing world: Inclusive, innovative and reflective societies' will support social sciences and humanities research into issues of a horizontal nature such as the creation of smart and sustainable growth, social, cultural and behavioural transformations in European societies, social innovation, innovation in the public sector or the position of Europe as a global actor.

## **B. Science and society**

The relationship **and interaction** between science and society as well as the promotion of Responsible Research and Innovation and science education, **science communication** and culture shall be deepened and public confidence in science **and innovation** reinforced by activities of Horizon 2020 favouring an informed engagement of **and a dialogue with** citizens and civil society in research and innovation matters.

## **C. Gender**

Promoting gender equality in science and innovation is a commitment of the EU. In Horizon 2020, gender will be addressed as a cross-cutting issue in order to rectify imbalances between women and men, and to integrate a gender dimension in research and innovation programming and content.

## **D. Small and medium-sized enterprises (SMEs)**

Horizon 2020 will encourage and support the **increased** participation of SMEs in an integrated way across all specific objectives.

**Further to the establishment of better conditions for SMEs to participate in Horizon 2020,** in accordance with Article 18 of Horizon 2020, dedicated measures as set out in the specific objective 'Innovation in SMEs' (dedicated SME instrument) shall be applied in the specific objective 'Leadership in enabling and industrial technologies' and Part III 'Societal challenges'. This integrated approach should lead to a minimum of 20 % of their total combined budgets going to SMEs.

## **E. Widening the participation**

The research and innovation potential of the Member States, despite some recent convergence, remain very different, with large gaps between “innovation leaders” and “modest innovators”. Activities shall help close the research and innovation divide in Europe and specific measures shall be taken to unlock excellence in low performing RDI regions, thereby widening participation in Horizon 2020 and contributing to the realisation of the European Research Area.

## **F. International cooperation**

International cooperation with partners in third countries is necessary to address effectively many specific objectives defined in Horizon 2020, in particular those relating to Union external policies and international commitments. This is the case for all the societal challenges addressed by Horizon 2020, which are common in nature. International cooperation is also essential for frontier and basic research in order to capture the benefits from emerging science and technology opportunities. Promoting researchers and innovation staff mobility at an international scale is therefore crucial to enhance this global cooperation. Activities at the international level are equally important to enhance the competitiveness of European industry by promoting the take-up and trade of novel technologies, for instance through the development of worldwide standards and interoperability guidelines, and by promoting the acceptance and deployment of European solutions outside Europe. All international activities should be supported by an efficient and fair knowledge transfer framework which is critical for innovation and growth.

The focus of international cooperation in Horizon 2020 will be on cooperation with three major country groupings:

- (1) industrialised and emerging economies;
- (2) enlargement and neighbourhood countries; and
- (3) developing countries.

Where appropriate, Horizon 2020 will promote cooperation at bi-regional or multilateral level. International cooperation in research and innovation is a key aspect of the Union's global commitments and has an important role to play in the Union's partnership with developing countries, such as progressing towards the achievement of the Millennium Development Goals.

Article 21 of Horizon 2020 sets out the general principles for participation of organisations from third countries and international organisations. As research and innovation in general benefit largely from an openness towards third countries, Horizon 2020 will continue with the principle of general openness, while encouraging reciprocal access to third country programmes. ~~For a number of areas, however, a more cautious approach may be advisable~~ **Where appropriate, and notably** to safeguard European interest **as regards intellectual property, a more cautious approach will be adopted.**

In addition, a range of targeted actions will be implemented taking a strategic approach to international cooperation on the basis of common interest, priorities and mutual benefit and promoting coordination and synergies with Member States activities. This will include a mechanism for supporting joint calls and the possibility of co-funding programmes together with third countries or international organisations.

Cooperation with the Strategic Forum for International scientific and technological Cooperation (SFIC) will continue to be sought.

Without prejudice to other collaboration opportunities, examples of areas where such strategic international cooperation may be developed are:

- (a) The continuation of the *European and Developing Countries Clinical Trials Partnership* (EDCTP2) on clinical trials for medical interventions against HIV, malaria and tuberculosis;

- (b) Support by way of an annual subscription to the *Human Science Frontier Programme* (HSFP) to allow non-G7 Member States of the Union to fully benefit from the funding provided by the HSFP;
- (c) International consortium on *rare diseases*, with a number of Union Member States and third countries. The aim of this initiative is to develop by 2020, diagnostic tests for most rare diseases and 200 new therapies for rare diseases;
- (d) Support to the activities of the International Knowledge-Based Bio-Economy Forum and the *EU-US Task Force* on Biotechnology Research as well as collaborative links with relevant international organisations and initiatives (such as global research alliances on agricultural greenhouse gases and on animal health);
- (e) Contribution to *multilateral processes and initiatives*, such as the Intergovernmental Panel on Climate Change (IPCC), the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), and the Group on Earth Observations (GEO);
- (f) The *Space Dialogues* between the Union and the United States of America and Russia, the two major space faring nations, is an extremely valuable one and forms the basis for the establishment of strategic cooperation in space partnerships such as the International Space Station or launchers, and collaboration in cutting edge space RTD projects.

In addition, dedicated horizontal activities will be supported in order to ensure the coherent and effective development of international cooperation across Horizon 2020.

## **G. Sustainable development and climate change**

Horizon 2020 will encourage and support activities towards exploiting Europe's leadership in the race to develop new processes and technologies promoting sustainable development, in a broad sense, and combating climate change. Such horizontal approach, fully integrated in all Horizon 2020 priorities, will help the EU to prosper in a low-carbon, resource constrained world while building a resource efficient, sustainable and competitive economy.

## **H. Bridging from discovery to market application**

Bridging actions throughout Horizon 2020 are aimed at bringing discovery to market application, leading to exploitation and commercialisation of ideas whenever appropriate. The actions should be based on a broad innovation concept and stimulate cross-sectoral innovation.

## **I. Digital Agenda**

Successful delivery of the Digital Agenda flagship initiative will spur innovation, economic growth and improvements in daily life for both citizens and business. Wider and more effective use of digital agenda technologies will thus enable Europe to address its key challenges.

## **J. Cross-cutting support measures**

The cross-cutting issues will be supported by a number of transversal support measures, including support to: enhancing the attractiveness of the research profession, including the general principles of the European Charter for researchers; strengthening the evidence base and the development of and support for ERA (including the five ERA initiatives) and the Innovation Union; improving framework conditions in support of the Innovation Union, including the principles of the Commission Recommendation on the management of intellectual property<sup>3</sup> and exploring the possibility of setting up an European Intellectual Property Rights valorisation instrument; administration and coordination of international networks for excellent researchers and innovators (such as COST).

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<sup>3</sup> Commission Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations (C(2008) 1329, of 10.4.2008).



### 3. PARTNERING

For achieving sustainable growth in Europe, the contribution of public and private players must be optimised. This is essential for consolidating the European Research Area and for delivering on the Innovation Union, the Digital Agenda and other Europe 2020 flagship initiatives. Furthermore, responsible research and innovation requires that best solutions be derived from interactions between partners having various perspectives but common interests.

Horizon 2020 includes scope and a clear set of criteria for setting up public-public and public-private partnerships. Public-private partnerships can be based on a contractual arrangement between public and private actors and can in limited cases be institutionalised public-private partnerships (such as Joint Technology Initiatives and other Joint Undertakings).

Existing public-public and public-private partnerships may receive support from Horizon 2020, provided they address Horizon 2020 objectives, **they contribute to realising the ERA**, they meet the criteria laid down in Horizon 2020 and they have shown to make significant progress under the Seventh Framework Programme for Research, Technological Development and Demonstration (FP7).

Initiatives under Article 185 of the Treaty supported under FP6 and/or FP7 for which further support may be provided under the above conditions include: the European and Developing Countries Clinical Trials Partnership (EDCTP), Ambient Assisted Living (AAL), Baltic Sea Research and Development Programme (BONUS), Eurostars and the European Metrology Research Programme. Further support may also be provided to the European Energy Research Alliance (EERA) established under the Strategic Energy Technology Plan (SET Plan). Joint Programming Initiatives may be supported by Horizon 2020 through the instruments referred to in Article 20 of [Framework Regulation], including through initiatives under Article 185 of the Treaty.

Joint Undertakings established in FP7 under Article 187 of the Treaty, for which further support may be provided under the above conditions are: the Innovative Medicines Initiative (IMI), Clean Sky, Single European Sky ATM Research (SESAR), Fuel Cells and Hydrogen (FCH), and Embedded computing systems (ARTEMIS) and Nanoelectronics (ENIAC). The latter two may be combined into a single initiative.

Other public-private partnerships supported under FP7 for which further support may be provided under the above conditions are: Factories of the Future, Energy-efficient Buildings, European Green Cars Initiative, Future Internet. Further support may also be provided to the European Industrial Initiatives (EIIs) established under the SET Plan.

Further public-public partnerships and public-private partnerships may be launched under Horizon 2020 where they meet the defined criteria.

## ANNEX II

### Performance indicators

The following table specifies for the specific objectives of Horizon 2020 a number of key indicators for assessing results and impacts that may be refined during the implementation of Horizon 2020.

#### 1. PART I. PRIORITY 'EXCELLENT SCIENCE'

##### Indicators for the specific objectives:

- European Research Council
  - Share of publications from ERC funded projects which are among the top 1 % highly cited **per field of science**
  
- Future and Emerging Technologies
  - Publications in peer-reviewed high impact journals
  - Patent applications **and patents awarded** in Future and Emerging Technologies
  
- Marie Skłodowska-Curie actions on skills, training and career development
  - Cross-sector and cross-country circulation of researchers, including PhD candidates
  
- European research infrastructures (including eInfrastructures)
  - Number of additional researchers who have access to research infrastructures through Union support

## 2. PART II. PRIORITY 'INDUSTRIAL LEADERSHIP'

### Indicators for the specific objectives:

- Leadership in enabling and industrial technologies (ICT, Nanotechnologies, Advanced Materials, Biotechnologies, Advanced manufacturing and Space)
  - Patent applications **and patents awarded** obtained in the different enabling and industrial technologies
  - Share of participating firms introducing innovations new to the company or the market (covering the period of the project plus three years)
  
- Access to risk finance
  - Total investments mobilised via debt financing and Venture Capital investments
  - **Number of organisations funded and amount of private funds leveraged**
  
- Innovation in SMEs
  - Share of participating SMEs introducing innovations new to the company or the market (covering the period of the project plus three years)
  - **Growth and job creation in participating SMEs**

## 3. PART III. PRIORITY 'SOCIAL CHALLENGES'

### Indicators for the specific objectives:

- For all Societal Challenges:
  - Publications in peer-reviewed high impact journals in the area of the different Societal Challenges
  - Patent applications **and patents awarded** in the area of the different Societal Challenges
  - **Number of prototypes and testing activities**
  - **Number of joint public-private publications**

Moreover, for each of the challenges, progress shall be assessed against the contribution to the specific objectives which are detailed in Annex I of Regulation (EU) No XX/2012 [Horizon 2020].

#### **4. PART IV. NON-NUCLEAR DIRECT ACTIONS OF THE JOINT RESEARCH CENTRE**

##### **Indicators for the specific objectives:**

- Number of occurrences of tangible specific impacts on European policies resulting from technical and scientific support provided by the Joint Research Centre
- Number of peer reviewed publications in high impact journals

## ANNEX III

### Monitoring

The Commission will monitor the implementation of Horizon 2020 and in particular the following:

1. ~~Contribution of Horizon 2020 to the realisation of the European Research Area, covering in particular:~~
  - ~~—— Average number of EU Member States and Associated States represented by partners in an action within Horizon 2020~~
  
2. ~~Widening the participation in Horizon 2020, covering in particular:~~
  - ~~—— Total financial contribution from Horizon 2020 per GDP of a participating State~~
  - ~~—— Total number of Horizon 2020 actions per GDP of a participating State~~
  - ~~—— Number of coordinated Horizon 2020 actions per GDP of a participating State~~
  
3. ~~SMEs participation, covering in particular:~~
  - ~~—— Growth and jobs creation in participating SMEs~~
  
4. ~~Cooperation and joint actions of National Contact Points (NCPs) and Enterprise Europe Network (EEN), covering in particular:~~
  - ~~—— Number of jointly implemented info-days~~
  - ~~—— Number of successful partner search requests~~
  
5. ~~Publication of results, covering in particular:~~
  - ~~—— Percentage of papers supported through Union funding, which are published in line with open access mechanisms.~~

#### **4. Social Sciences and Humanities**

#### **5. Science and Society**

- 6. Gender**
- 7. International Cooperation**
- 8. Sustainable development and climate change, including information on climate change related expenditure**
- 9. Bridging from discovery to market application**
- 10. Digital Agenda**
- 11. Private Sector Participation**
- 12. Funding for Public Private and Public Public Partnerships**
- 13. Communication and dissemination**

## ANNEX IV

### Information to be provided by the Commission in accordance with article 8a(2)

- 1. Information on individual projects, enabling the monitoring of the entire lifetime of each proposal, covering in particular:**
  - submitted proposals,
  - evaluation results for each proposal,
  - grant agreements,
  - completed projects.
  
- 2. Information on the outcome of each call and project implementation, covering in particular:**
  - results of each call,
  - outcome of negotiations on grant agreements,
  - project implementation, including payment data and outcome of projects.
  
- 3. Information on programme implementation, including relevant information at the level of the Framework Programme, the specific programme and each theme.**