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PROPOSAL

From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
date of receipt:	7 June 2018
To:	Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union
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Subject:	Proposal for a DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on establishing the specific programme implementing Horizon Europe – the Framework Programme for Research and Innovation

Delegations will find attached document COM(2018) 436 final.

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Brussels, 7.6.2018
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2018/0225 (COD)

Proposal for a

DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on establishing the specific programme implementing Horizon Europe – the Framework Programme for Research and Innovation

(Text with EEA relevance)

{SEC(2018) 291 final} - {SWD(2018) 307 final} - {SWD(2018) 308 final} -
{SWD(2018) 309 final}

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE PROPOSAL

- **Reasons and objectives**

The 'Horizon Europe' proposal is fully in line with the Commission's proposal on the next long-term Union budget for 2021 to 2027, as well as the Commission's priorities, as set out in its Agenda for Jobs, Growth, Fairness and Democratic Change and global policy priorities (the Sustainable Development Goals). It supports the agenda of the Union post-2020 as agreed in the Rome Declaration of 25 March 2017.

The proposal is framed by the premise that research and innovation (R&I) delivers on citizens' priorities, boosts the Union's productivity and competitiveness, and is crucial for sustaining our socio-economic model and values, and enabling solutions that address challenges in a more systemic way.

As per Article 182 of the Treaty on the Functioning of the European Union ('TFEU') the framework programme shall be implemented through specific programmes that set out detailed rules for implementing it, fix its duration and provide for the means deemed necessary. The programme Horizon Europe will be implemented through the specific programme established by this Decision and the specific programme on defence research.

The specific programme established by this Decision is based both on Article 182 TFEU and, due to its strong support for innovation, on Article 173 TFEU.

For more on the overall Horizon Europe proposal, see the explanatory memorandum for the underlying act (proposal for a regulation establishing 'Horizon Europe – the Framework Programme for Research and Innovation and laying down its rules for participation and dissemination').

This proposal provides for a date of application as of 1 January 2021 and is presented for a Union of 27 Member States, in line with the notification by the United Kingdom of its intention to withdraw from the European Union and Euratom based on Article 50 of the Treaty on European Union received by the European Council on 29 March 2017. The following section details the specific points in this proposal.

2. OTHER ELEMENTS

- **Detailed explanation of the specific provisions of the proposal**

The proposal for the Framework Programme (a Framework Programme for Research and Innovation entitled 'Horizon Europe', including laying down its rules for participation and dissemination), sets out the general and specific objective of Horizon Europe, the structure and the broad lines activities to be carried out, while this Decision should define the operational objectives and the activities which are specific to parts of Horizon Europe.

This legal act sets out specific implementation and programming provisions for the framework programme, especially for

- Missions (under the Global Challenges and Industrial Competitiveness pillar);
- the European Research Council (ERC);

- the European Innovation Council (EIC);
- work programmes;
- committee procedure.

Strategic planning

The implementation of Horizon Europe will be steered by an inclusive and transparent **strategic planning** process of the research and innovation activities the programme will fund. This will follow extensive consultations and exchanges with Member States, the European Parliament as appropriate, and with various stakeholders, including civil society organisations, about priorities (including missions, under the Global Challenges and Industrial Competitiveness pillar), and the suitable types of action and forms of implementation, in particular European partnerships.

The **strategic planning** exercise will lay out a multiannual strategy for the development of **work programme** content (as set out in Article 11), though it will remain sufficiently flexible to respond rapidly to unexpected needs and crises, as well as the policy priorities set out in the Commission’s Work Programme cycle. It will take the second pillar – Global Challenges and Industrial Competitiveness - as the centre of gravity for this planning.

The priorities of Horizon Europe will be very closely aligned with the Union’s general strategic priorities and its policies. The strategic planning will be based on foresight activities, studies and other scientific evidence and take account of relevant existing initiatives at Union and national level. It will incorporate inter-disciplinary and cross-sectoral perspectives and ensure that all activities under Horizon Europe are coordinated in an effective manner.

It will also be aligned tightly with other Union programmes, not least to promote faster dissemination and uptake of results from investments in research and innovation.

The Commission proposal for the 2021-2027 Multiannual Financial Framework set a more ambitious goal for climate mainstreaming across all EU programmes, with an overall target of 25% of EU expenditure contributing to climate objectives. The contribution of this programme to the achievement of this overall target will be tracked through an EU climate marker system at an appropriate level of disaggregation, including the use of more precise methodologies where these are available. The Commission will continue to present the information annually in terms of commitment appropriations in the context of the annual draft budget.

To support the full utilisation of the potential of the programme to contribute to climate objectives, the Commission will seek to identify relevant actions throughout the programme preparation, implementation, review and evaluation processes.

Pillars

Horizon Europe will consist of 3 strands, or ‘pillars’:

- I. ‘Open Science’;
- II. ‘Global Challenges and Industrial Competitiveness’;
- III. ‘Open Innovation’.

Pillar I – ‘Open Science’

This pillar builds on the success of the European Research Council, the Marie Skłodowska-Curie Actions and the Research Infrastructures component in the current framework programme. For the specific rules on the European Research Council see Articles 6 to 8.

Pillar II – ‘Global Challenges and Industrial Competitiveness’

This pillar includes five thematic clusters that address the full spectrum of global challenges through top-down collaborative R&I activities.

- ‘Health’;
- ‘Inclusive and Secure Society’;
- ‘Digital and Industry’;
- ‘Climate, Energy and Mobility’;
- ‘Food and Natural Resources’..

The clusters – supported by areas of intervention – cut across typical boundaries between disciplines, sectors and policy areas and will lead to more collaboration and increased impact in what concerns Union and global policy priorities.

The entire pillar is designed to be more impact-oriented.

Missions

A small number of **missions** with specific goals will be launched from within the pillar, establishing a comprehensive portfolio of projects, but also drawing on relevant activities and outputs from other parts of the programme. The specific provisions on missions are set out in Article 5.

Missions will be decided and co-designed as part of the Horizon Europe strategic planning process, which will include a collaborative effort by relevant Commission departments, Member States, the European Parliament and relevant stakeholders.

There will not be a separate budget for missions, though missions will have a budget assigned through the work programme. Missions are normally expected to be cross-cutting in nature and so receive their budget from more than one cluster.

The first few missions will be introduced in the first strategic planning exercise. Based on the first two years' experience, the number and scale of missions could be increased in subsequent work programmes. Whilst the duration of the Union support to missions would not be expected to exceed 10 years and will be subject to regular review (through the work programme cycle), the timeframe for expected impact of missions could spread out beyond this timeframe.

For co-designing the missions and steering their implementation, the Commission may set up *mission boards*. They will advise on potential high-impact missions and rely in doing so on a design process that involves stakeholders and includes public outreach. The mission boards will be composed of stakeholders, including end-users to ensure their engagement, and Commission departments to ensure links to Union policies. The members of the mission boards will normally be appointed by the Commission, following an open call for expression of interests, and taking into account the need for balance in expertise, gender, age and geographical distribution. However, if appropriate, existing governance structures could also be used as mission boards.

Mission managers may be recruited by the Commission to ensure that the best available expertise is used to implement and achieve the stated objectives.

The implementation provisions will allow a ‘portfolio approach’, whereby proposals will be evaluated and selected, and projects managed within a portfolio of actions, rather than individually.

The evaluation of proposals will be done with the help of independent evaluators who will be responsible for proposing a portfolio of projects that collectively address a given mission.

The applicable evaluation and selection criteria, along with the evaluation method for missions (e.g. ensuring a portfolio approach), will be set out in the work programme. The aim is will be to assess excellence and impact at the collective level.

Other relevant projects which may contribute to the success of the missions may be incorporated in the portfolio approach, and a broad range of actors, such as foundations, may also be able to contribute.

The Future and Emerging Technologies (FET) flagships of Horizon 2020 have similar features to the mission's concept. For this reason, and also to simplify the funding landscape, any FET flagships planned under Horizon Europe will be set up as missions, in accordance with the mission criteria and implemented using the same modalities.

Pillar III – ‘Open Innovation’

This pillar will essentially focus on:

- scaling up breakthrough and market-creating innovation through a new **European Innovation Council** (EIC – see articles 9 to 10); and
- activities aiming at enhancing and developing the overall European innovation landscape, including support to the **European Institute of Innovation and Technology** (EIT).

To implement the EIC, the Commission will establish a high level board (the EIC Board) that will advise, inter alia, on the overall strategy, objectives, activities, evaluation criteria and selection of experts. The work programme for the implementation of the EIC actions will be prepared by the Commission on the basis of the advice of the EIC Board.

The European Innovation Council will be the sole channel for the Union support to breakthrough market-creating innovation. It will govern relevant activities previously carried out in Horizon 2020, such as Innovation in SMEs and Future and Emerging Technologies (FET Open and FET Proactive), and Access to Risk Finance (now aligned with the InvestEU Fund Regulation).

The Commission may recruit programme managers, following an open and transparent selection procedure, for the implementation of the EIC.

The EIC will provide direct tailor-made support to innovators through two main funding instruments – the *Pathfinder* and the *Accelerator* – which will both focus through a mainly bottom-up, high-risk approach on breakthrough innovation; on innovator needs and be pro-actively managed.

The *Pathfinder for Advanced Research* will provide grants from the early technology stage (including proof-of-concept, technology validation) to the early commercial stage (early demonstration, developing a business case and strategy).

The *Accelerator* will support the further development and market deployment of breakthrough and market-creating innovations, to a stage where it can be financed under normal commercial terms by investors (e.g. from demonstration, user testing, pre-commercial production, including scale-up). It will provide EIC blended finance (i.e. grants combining direct equity and access to financial guarantees).

The Accelerator will place a particular emphasis on innovation generated within the Pathfinder, though it will also fund projects from other parts of Horizon Europe such as the European Research Council or the European Institute of Innovation and Technology's *Knowledge and Innovation Communities*.

Another feature of the Open Innovation pillar is an increased cooperation with innovation ecosystems aimed at improving the environment within which innovation can flourish, in particular but not exclusively via the EIT, which will promote sustainable innovation ecosystems and develop entrepreneurial and innovation skills in priority areas through its Knowledge and Innovation Communities.

Part ‘Strengthening the European Research Area’

The main components of this particular part are: ‘sharing excellence’; and ‘reforming and enhancing the European R&I system’, covering the next generation Policy Support Facility.

This part will also include activities on: foresight activities; monitoring and evaluating the Framework Programme and disseminating and exploiting results; modernising European universities; supporting enhanced international cooperation; and science, society and citizens.

Implementation

In implementing Horizon Europe, the Commission will be assisted by a **Committee** (see Article 12) within the meaning of Regulation (EU) No 182/2011. It would meet in different configurations (see Annex II of this Decision), depending on the subject matter to be discussed.

Programme Activities

See Annex I of this proposal for more detail on the areas funded under each of the pillars and on programme activities. This includes implementation arrangements and general principles with a specific focus on strategic planning, dissemination and communication, exploitation and market uptake, support for policy-making and international cooperation.

Proposal for a

DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on establishing the specific programme implementing Horizon Europe – the Framework Programme for Research and Innovation

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Articles 173(3) and 182(4) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee¹,

Having regard to the opinion of the Committee of the Regions²,

Acting in accordance with the ordinary legislative procedure

Whereas:

- (1) In accordance with Article 182(3) of the Treaty on the Functioning of the European Union (TFEU), the Horizon Europe - Framework Programme for Research and Innovation ("Horizon Europe"), established by *FP/RfP Regulation* (EU) No ... of the European Parliament and of the Council of...³, is to be implemented through specific programmes, which define the detailed rules for their implementation, fix their duration and provide for the means deemed necessary.
- (2) *FP/RfP Regulation* (EU) No ... sets out the general and specific objectives of Horizon Europe, the structure and the broad lines of activities to be carried out, while this specific programme implementing Horizon Europe - the Framework Programme for Research and Innovation (the 'Specific Programme') should define the operational objectives and the activities which are specific to parts of Horizon Europe. The provisions on implementation set out in *FP/RfP Regulation* (EU) No ... apply fully to the Specific Programme, including those relating to ethical principles.
- (3) In order to ensure uniform conditions for the implementation of the Specific Programme, implementing powers should be conferred on the Commission to adopt work programmes for the implementation of the Specific Programme. Those powers should be exercised in

¹ OJ C , , p. .

² OJ C , , p. .

³ OJ C , , p. .

accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council⁴.

- (4) The Board of Governors of the Joint Research Centre (JRC), set up by Commission Decision 96/282/Euratom⁵ has been consulted on the scientific and technological content of the Specific Programme on the non-nuclear direct actions of the JRC;
- (5) Reflecting the importance of tackling climate change in line with the Union's commitments to implement the Paris Agreement and the United Nations Sustainable Development Goals, this Specific Programme will contribute to mainstream climate actions and to the achievement of an overall target of 25 % of the EU budget expenditures supporting climate objectives. Actions under this Specific Programme are expected to contribute 35% of the overall financial envelope of the Specific Programme to climate objectives. Relevant actions will be identified during the Specific Programme's preparation and implementation, and reassessed in the context of the relevant evaluations and review processes.
- (6) The Specific Programme's actions should be used to address market failures or sub-optimal investment situations, in a proportionate manner, without duplicating or crowding out private financing and have a clear European added value.
- (7) Reflecting the important contribution that research and innovation should make to address challenges in food, agriculture, rural development and the bioeconomy, and to seize the corresponding research and innovation opportunities in close synergy with Common Agricultural Policy, relevant actions under the Specific Programme will be supported with EUR 10 billion for the cluster 'Food and Natural Resources' for the period 2021-2027.
- (8) The completion of the Digital Single Market and the growing opportunities from the convergence of digital and physical technologies requires a stepping up of investments. Horizon Europe will contribute to these efforts with a substantial increase of spending in main digital research and innovation activities compared to the Research and Innovation Framework Programme Horizon 2020⁶. This should ensure that Europe remains at the forefront of global research and innovation in the digital field.
- (9) The types of financing and the methods of implementation under this Decision shall be chosen on the basis of their ability to achieve the specific objectives of the actions and to deliver results, taking into account, in particular, the costs of controls, the administrative burden, and the expected risk of non-compliance. For grants, this shall include consideration of the use of lump sums, flat rates and scales of unit costs.

⁴ Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by the Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13)

⁵ Commission Decision 96/282/Euratom of 10 April 1996 on the reorganization of the Joint Research Centre (OJ L 107, 30.4.1996, p. 12).

⁶ The Communication from the Commission "A new, modern Multiannual Financial Framework for a European Union that deliver efficiently on its priorities post-2020" identifies EUR 13 billion spent in main digital activities under the Research and Innovation Framework Programme Horizon 2020 (<https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A52018DC0098>).

HAVE ADOPTED THIS DECISION:

CHAPTER I
GENERAL PROVISIONS

Article 1

Subject matter

This Decision establishes the specific programme implementing Horizon Europe - the Framework Programme for Research and Innovation (the ‘Specific Programme’), as set out in Article 1(3)(a) of the *FP/RfP Regulation.../.../EU*.

It lays down the operational objectives of the Specific Programme, the budget for the period 2021 – 2027, the rules for implementation of the Specific Programme and activities to be carried out under the Specific Programme .

Article 2

Operational objectives

1. The Specific Programme shall contribute to the general and specific objectives set out in Article 3 of Regulation ... *FP/RfP Regulation*
2. The Specific Programme has the following operational objectives:
 - (a) reinforcing and spreading excellence;
 - (b) increasing collaboration across sectors and disciplines;
 - (c) connecting and developing research infrastructures across the European research area;
 - (d) strengthening international cooperation;
 - (e) attracting, training and retaining researchers and innovators in the European Research Area, including through mobility of researchers;
 - (f) fostering open science and ensuring visibility to the public and open access to results;
 - (g) actively disseminating and exploiting results, in particular for policy development;
 - (h) supporting the implementation of Union policy priorities;
 - (i) reinforcing the link between research and innovation and other policies, including Sustainable Development Goals;
 - (j) delivering, through R&I missions, on ambitious goals within a set timeframe;
 - (k) involving citizens and end-users in co-design and co-creation processes;
 - (l) improving science communication.
 - (m) accelerating industrial transformation;
 - (n) improving skills for innovation;
 - (o) stimulating the creation and scale-up of innovative companies, in particular SMEs;
 - (p) improving access to risk finance, in particular where the market does not provide viable financing.

3. Within the objectives referred to in paragraph 2, account may be taken of new and unforeseen needs that arise during the period of implementation of the Specific Programme. That may, if duly justified, include responses to emerging opportunities, crises and threats, as well as responses to needs relating to the development of new Union policies.

Article 3

Structure

1. In accordance with Article 4(1) of Regulation ... *FP/RfP Regulation*, the Specific Programme shall consist of the following parts:
 - (1) Pillar I 'Open Science' with the following components:
 - (a) the European Research Council (ERC), as described in Annex I, Pillar I, section 1;
 - (b) Marie Skłodowska-Curie actions (MSCA), as described in Annex I, Pillar I, section 2;
 - (c) research infrastructures, as described in Annex I, Pillar I, section 3;
 - (2) Pillar II 'Global Challenges and Industrial Competitiveness' with the following components:
 - (a) cluster 'Health', as described in Annex I, Pillar II, section 1;
 - (b) cluster 'Inclusive and Secure Society', as described in Annex I, Pillar II, section 2;
 - (c) cluster 'Digital and Industry', as described in Annex I, Pillar II, section 3;
 - (d) cluster 'Climate, Energy and Mobility', as described in Annex I, Pillar II, section 4;
 - (e) cluster 'Food and Natural Resources', as described in Annex I, Pillar II, section 5;
 - (f) non-nuclear direct actions of the Joint Research Centre (JRC), as described in Annex I, Pillar II, section 6;
 - (3) Pillar III 'Open Innovation' with the following components:
 - (a) the European Innovation Council (EIC), as described in Annex I, Pillar III, section 1;
 - (b) European innovation ecosystems, as described in Annex I, Pillar III, section 2;
 - (c) the European Institute of Innovation and Technology (EIT), as described in Annex I, Pillar III, section 3.
 - (4) Part 'Strengthening the European Research Area' with the following components:
 - (a) sharing excellence, as described in Annex I, Part 'Strengthening the European Research Area', section 1;
 - (b) reforming and enhancing the European R&I system, as described in Annex I, Part 'Strengthening the European Research Area', section 2.
2. The activities to be carried out under the parts referred to in paragraph 1 are set out in Annex I.

Article 4

Budget

1. In accordance with Article 9(1) of Regulation ... *FP/RfP Regulation*, the financial envelope for the implementation of the Specific Programme for the period 2021 to 2027 shall be EUR 94 100 000 000 in current prices.
2. The amount referred to in paragraph 1 of this Article shall be distributed among the components set out in Article 3(1) of this Decision in accordance with Article 9(2) of Regulation ... *FP/RfP Regulation*. The arrangements of Article 9(3) to (8) of Regulation ... *FP/RfP Regulation* shall apply.

CHAPTER II

IMPLEMENTATION AND PROGRAMMING

Article 5

Missions

1. For each mission, a mission board may be established. It shall be composed of around 15 high level individuals including relevant end-users' representatives. The mission board shall advise upon the following:
 - (a) content of work programmes and their revision as needed for achieving the mission objectives, in co-design with stakeholders and the public where relevant;
 - (b) adjustment actions, or termination if appropriate, based on implementation assessments of the mission;
 - (c) selection of expert evaluators, briefing of expert evaluators and evaluation criteria and their weighting;
 - (d) framework conditions which help achieve the objectives of the mission;
 - (e) communication.
2. Specific provisions to enable an efficient and flexible portfolio approach may be set out in the work programme provided for in Article 11.

Article 6

European Research Council

1. The Commission shall establish a European Research Council ("ERC"), for implementing the actions under Pillar I 'Open Science' which relate to the ERC. The ERC shall succeed the ERC set up by Decision C(2013) 1895⁷.
2. The ERC shall be composed of the independent Scientific Council provided for in Article 7 and the dedicated implementation structure provided for in Article 8.

⁷ OJ C 373, 20.12.2013, p. 23

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 transparent recruitment process involving an independent 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 ERC shall operate according to the principles of scientific excellence, autonomy, efficiency, effectiveness, transparency and accountability. It shall ensure continuity with ERC actions conducted under Decision .../EC.
5. The activities of the ERC shall support research carried out across all fields by individual and transnational teams in competition at the European level.
6. The Commission shall act as the guarantor of the autonomy and integrity of the ERC and shall ensure the proper execution of the tasks entrusted to it.

The Commission shall ensure that the implementation of the ERC actions is in accordance with the principles set out in paragraph 4 of this Article as well as with the overall strategy for the ERC, referred to in point (a) of Article 7(2), established by the Scientific Council.

Article 7

ERC Scientific Council

1. The Scientific Council shall be composed of scientists, engineers and scholars of the highest repute and appropriate expertise, of both women and men in different age groups, 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 the 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 ERC;
 - (b) the work programme for the implementation of the ERC 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 perspective may enhance achievements and impact of the ERC 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 Pillar I of Annex I, section 1.
4. The Scientific Council shall act exclusively in the interest of achieving the ERC, according to the principles set out in Article 6. It shall act with integrity and probity and carry out its work efficiently and with the greatest possible transparency.

Article 8

Dedicated ERC implementation structure

1. The dedicated implementation structure shall be responsible for the administrative implementation and programme execution, as described in Pillar I of Annex I, section 1. It 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 ERC alone.

Article 9

The European Innovation Council

1. The Commission shall establish a European Innovation Council (EIC) for implementing actions under Pillar III 'Open Innovation' which relate to the EIC. The EIC shall operate according to the following principles: focus on breakthrough and disruptive innovation, autonomy, ability to take risk, efficiency, effectiveness, transparency and accountability.
2. The EIC shall include the High Level Board ("EIC Board") provided for in Article 10. .
3. The Commission shall ensure that the implementation of the EIC is:
 - (a) in accordance with the principles set out in paragraph 1 of this Article, taking due account of the opinion of the EIC Board on the overall strategy for the EIC, referred to Article 10(1)(a); and
 - (b) does not lead to distortions of competition contrary to the common interest.
4. For the purpose of managing EIC blended finance, the Commission shall make use of indirect management, or where this is not possible, may establish a special purpose vehicle. The Commission shall seek to ensure the participation of other public and private investors. Where this is not possible at the initial set up, the special purpose vehicle will be structured in such a way that it can attract other public or private investors in order to increase the leverage effect of the Union contribution.

Article 10

The EIC Board

1. The EIC Board shall advise the Commission upon:
 - (a) the overall strategy for the EIC component under Pillar III 'Open Innovation';
 - (b) the work programme for the implementation of the EIC actions;

- (c) the criteria for assessment of the innovativeness and risk profile of the proposals and the appropriate balance of grants, equity and other forms of financing for the EIC accelerator;
- (d) the identification of strategic portfolio of projects;
- (e) the profile of programme managers.

2. The EIC Board may upon request address recommendations to the Commission on:

- (a) any matter which from an innovation perspective may enhance and foster innovation eco-systems across Europe, the achievements and impact of the objectives of the EIC component and the capacity of innovative firms to roll out their solutions;
- (b) identify in cooperation with relevant Commission services possible regulatory barriers faced by entrepreneurs, in particular those awarded support under the EIC component;
- (c) emerging technology trends from EIC's portfolio, to inform the programming in other parts of the Specific Programme;
- (d) identifying specific issues where advice from the EIC Board is needed.

The EIC Board shall act in the interest of achieving the objectives of the EIC component. It shall act with integrity and probity and carry out its work efficiently and with transparency.

The EIC Board shall act in accordance with its mandate set out in Pillar III of Annex I, section 1.

3. The EIC Board shall be composed of 15 to 20 high level individuals drawn from various parts of Europe's innovation ecosystem, including entrepreneurs, corporate leaders, investors and researchers. It shall contribute to outreach actions, with EIC Board members striving to enhance the prestige of the EIC brand.

The members of the EIC Board shall be appointed by the Commission, following an open call for nominations or for expression of interests or both, whichever the Commission will find more appropriate, and taking into account the need for balance in expertise, gender, age and geographical distribution.

Their term of office shall be limited to two years, renewable twice, with a rolling appointments system (members appointed every two years).

4. The EIC Board shall have a President who shall be appointed by the Commission following a transparent recruitment process. The President shall be a high profile public figure linked to the innovation world.

The President shall be appointed for a term of office limited to four years, renewable once.

The President shall chair the EIC Board, prepare its meetings, assign tasks to members, and may establish dedicated sub-groups, in particular to identify emerging technology trends from EIC's portfolio. He or she shall promote the EIC, act as interlocutor with the Commission and represent the EIC in the world of innovation. The Commission may provide for administrative support for the President to undertake his or her duties.

5. A code of conduct addressing, inter alia, the avoidance of conflict of interests shall be established by the Commission. Members of the EIC Board are expected to accept the code of conduct upon assuming office.

Article 11

Work programmes

1. The Programme shall be implemented by work programmes referred to in Article 110 of Financial Regulation. They shall be prepared following a strategic planning process as described in Annex I to this Decision.

Work programmes shall set out, where applicable, the overall amount reserved for blending operations.
2. The Commission shall adopt separate work programmes, by means of implementing acts, for the implementation of actions under the following components, as set out in Article 3(1) of this Decision :
 - (a) the ERC, where the work programme shall be established by the Scientific Council under point (b) of Article 7(2), in accordance with the advisory procedure referred to in Article 12(3). 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 12(4). The Commission shall duly motivate this measure;
 - (b) all clusters under the pillar 'Global Challenges and Industrial Competitiveness', MSCA, research infrastructures, support to innovation ecosystems, sharing excellence and reforming and enhancing the European R&I System, in accordance with the examination procedure referred to in Article 12(4);
 - (c) the EIC, where the work programme shall be prepared following the advice of the EIC Board under point (b) of Article 10(1), in accordance with the examination procedure referred to in Article 12(4);
 - (d) the JRC, where the multi-annual work programme shall take into account the opinion provided by the Board of Governors of the JRC referred to in Decision 96/282/Euratom.
3. In addition to requirement in Article 110 of the Financial Regulation, the work programmes referred to in paragraph 2 of this Article shall, as appropriate, contain:
 - (a) an indication of the amount allocated to each action and mission and an indicative implementation timetable;
 - (b) for grants the priorities, the selection and award criteria and the relative weight of the different award criteria and the maximum rate of funding of the total eligible costs;
 - (c) the amount allocated to blended finance in accordance with Articles 41 to 43 of Regulation ... *FP/RfP Regulation*;
 - (d) any additional obligations for beneficiaries, in accordance with Articles 35 and 37 of the *FP/RfP Regulation*.

Article 12

Committee procedure

1. The Commission shall be assisted by a committee⁸. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.
2. The committee shall meet in different configurations as set out in Annex II, having regard to the subject matter to be discussed.
3. Where reference is made to this paragraph, Article 4 of Regulation (EU) No 182/2011 shall apply.
4. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.
5. Where the opinion of the committee 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.
6. The Commission shall regularly inform the Committee of the overall progress of the implementation of the specific programme and shall provide it with timely information on all actions proposed or funded under Horizon Europe, as specified in Annex III.

CHAPTER III

TRANSITIONAL AND FINAL PROVISIONS

Article 13

Repeal

Decision 2013/743/EU is repealed with effect from 1 January 2021.

Article 14

Transitional provisions

1. This Decision shall not affect the continuation or modification of the actions concerned, until their closure, under Decision 2013/743/EU, which shall continue to apply to the actions concerned until their closure.

Where necessary, any remaining tasks of the Committee established by Decision 2013/743/EU shall be undertaken by the Committee referred to in Article 12 of this Decision.
2. The financial envelope for the Specific Programme may also cover technical and administrative assistance expenses necessary to ensure the transition between the Specific Programme and the measures adopted under its predecessor Decision 2013/743/EU.

⁸ With a view to facilitating the implementation of the programme, for each meeting of the Programme Committee as defined in the agenda, the Commission will reimburse, in accordance with its established guidelines, the expenses of one representative per Member State, as well as one expert/adviser per Member State for those agenda items where a Member State requires specific expertise.

Article 15

Entry into force

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

This Decision is addressed to the Member States.

Done at Brussels,

For the European Parliament
The President

For the Council
The President

Working document for the preparation of the post 2020 basic acts
Legislative financial statement
annexed to the Specific programme implementing Horizon Europe

1. FRAMEWORK OF THE PROPOSAL/INITIATIVE

- 1.1. Title of the proposal/initiative
- 1.2. Policy area(s) concerned (*programme cluster*)
- 1.3. Nature of the proposal/initiative
- 1.4. Grounds for the proposal/initiative
- 1.5. Duration and financial impact
- 1.6. Management mode(s) planned

2. MANAGEMENT MEASURES

- 2.1. Monitoring and reporting rules
- 2.2. Management and control system
- 2.3. Measures to prevent fraud and irregularities

3. ESTIMATED FINANCIAL IMPACT OF THE PROPOSAL/INITIATIVE

- 3.1. Heading(s) of the multiannual financial framework and expenditure budget line(s) affected
- 3.2. Estimated impact on expenditure
 - 3.2.1. *Summary of estimated impact on expenditure*
 - 3.2.2. *Estimated impact on appropriations of an administrative nature*
 - 3.2.3. *Third-party contributions*
- 3.3. Estimated impact on revenue

LEGISLATIVE FINANCIAL STATEMENT

1. FRAMEWORK OF THE PROPOSAL/INITIATIVE

1.1. Title of the proposal/initiative

Specific programme implementing Horizon Europe

1.2. Policy area(s) concerned (*Programme cluster*)

01 – Research and Innovation

1.3. The proposal/initiative relates to:

- a new action
- a new action following a pilot project/preparatory action⁹
- the extension of an existing action
- a merger or redirection of one or more actions towards another/a new action

1.4. Grounds for the proposal/initiative

1.4.1. Requirement(s) to be met in the short or long term including a detailed timeline for roll-out of the implementation of the initiative

- support the creation and diffusion of high-quality new knowledge, technologies and solutions to global challenges;
- strengthen the impact of research and innovation in developing, supporting and implementing EU policies, and the uptake of innovative solutions in industry and society to address global challenges;
- foster all forms of innovation, including breakthrough innovation, and strengthen market deployment of innovative solutions;
- optimise the Programme's delivery for impact.

1.4.2. Added value of Union involvement (it may result from different factors, e.g. coordination gains, legal certainty, greater effectiveness or complementarities). For the purposes of this point 'added value of Union involvement' is the value resulting from Union intervention which is additional to the value that would have been otherwise created by Member States alone.

Research & Innovation (R&I) is a crucial part of the knowledge-based society and one where a strong European dimension leverage additional funds at national level, without evidence of substitution. Typically, R&I projects chosen for EU funding harness a higher level of EU or international cooperation and have a scale, scope and level of sophistication that would prevent them from going ahead with national funding alone (83 % of EU R&I projects would not have gone ahead without the EU-support). In a world of heightened technological competition, not investing in R&I on an EU scale would result in a decline of the EU's global competitiveness with foreseeable economic social and environmental impacts.

⁹ As referred to in Article 58(2)(a) or (b) of the Financial Regulation.

The specific benefits of EU investments in the area of R&I are:

- boosting EU competitiveness through the creation of trans-national and multidisciplinary networks and new markets, with positive knowledge dissemination and technology transfers across the Union to prepare deployment of new products and services (EU-funded R&I teams are 40 % more likely than non-EU funded teams to be granted patents, which are also of higher quality and commercial value);
- pooling public and private resources and knowledge to achieve critical mass for tackling global challenges and for taking leadership in EU and global markets (e.g. only EU-level action can overcome the thin distribution of patients affected by rare disease and the lack of standardisation and data);
- strengthening scientific excellence through EU-wide competition and cooperation (EU-funded peer-reviewed publications are cited more than twice the world average);
- strengthening support for the emergence and scale-up of breakthrough market creating innovations (SMEs supported through EU R&I funding grow faster than comparable non-EU funded SMEs);
- increasing the EU's attractiveness as a place for education, research, innovation and business (EU-funded teams grow faster and attract twice as many collaborations from outside the EU);
- having a positive structuring effect on national R&I ecosystems (the European Research Council has become a global beacon of excellence, inducing national and institutional changes to support and attract its grantees);
- providing a sound knowledge base for policy-making (e.g. the work of the UN's IPCC on climate change relied extensively on EU-funded research).

1.4.3. *Lessons learned from similar experiences in the past*

EU Framework Programmes have generated significant and long-lasting impacts, as shown by successive evaluations since the EU started investing in R&I in 1984. While European research and innovation programmes have been successful, there are important lessons to be learned from the past, from stakeholder feedback, and from analytical studies. Research, innovation and education should be addressed in a more coordinated manner and coherent with other policies and research results better disseminated and valorised into new products, processes and services. The intervention logic of EU support programmes should be developed in a more focused, concrete, detailed, inclusive and transparent manner. Programme access should be improved and start-up, SME, industrial, EU13 and extra-EU participation increased. Monitoring and evaluation need to be strengthened.

The Communication on the interim evaluation of Horizon 2020 identified several areas for improvement. Findings of the interim evaluation of Horizon 2020 were based on extensive stakeholder feedback and the strategic recommendations of the independent High Level Group on maximising the impact of EU R&I Programmes (Lamy High Level Group).

They could be summarised as follows:

- a. Continue simplification.
- b. Support breakthrough innovation.
- c. Create more impact through mission-orientation and citizen involvement.
- d. Increase synergies with other EU funding programmes and EU Policies.
- e. Strengthen international cooperation.
- f. Reinforce openness.
- g. Rationalise the funding landscape.

1.4.4. Compatibility and possible synergy with other appropriate instruments

Horizon Europe is designed to be implemented enabling synergies with other Union funding programmes, in particular through arrangements for complementary funding from EU programmes where management modalities permit; either in sequence, in an alternating way, or through the combination of funds including for the joint funding of actions.

A non-exhaustive list of such arrangements and funding programmes include synergies with the following programmes:

- Common Agricultural Policy (CAP)
- European Regional Development Fund (ERDF)
- European Social Fund (ESF)
- Single Market Programme
- European Space Programme
- Connecting Europe Facility (CEF)
- Digital Europe Programme (DEP)
- Erasmus Programme
- External Instrument
- InvestEU Fund
- Research and Training Programme of the European Atomic Energy Community

1.5. Duration and financial impact

limited duration

- in effect from 01/01/2021 to 31/12/2027
- Financial impact from 01/01/2021 to 31/12/2027 for commitment appropriations and from 01/01/2021 to 31/12/2033 for payment appropriations.

unlimited duration

- Implementation with a start-up period from YYYY to YYYY, followed by full-scale operation.

1.6. Management mode(s) planned¹⁰

Direct management by the Commission

- by its departments, including by its staff in the Union delegations;
- by the executive agencies

Shared management with the Member States

Indirect management by entrusting budget implementation tasks to:

- third countries or the bodies they have designated;
 - international organisations and their agencies (to be specified);
 - the EIB and the European Investment Fund;
 - bodies referred to in Articles 70 and 71 of the Financial Regulation;
 - public law bodies;
 - bodies governed by private law with a public service mission to the extent that they provide adequate financial guarantees;
 - bodies governed by the private law of a Member State that are entrusted with the implementation of a European Partnership and that provide adequate financial guarantees;
 - persons entrusted with the implementation of specific actions in the CFSP pursuant to Title V of the TEU, and identified in the relevant basic act.
- *If more than one management mode is indicated, please provide details in the 'Comments' section.*

Comments

The implementation of Horizon Europe activities will be following the main principles established for Horizon 2020, with a substantial part of the global Horizon Europe budget expected to be implemented through specially-designed management modes.

It is expected that the Commission will continue channelling most of the funds through the Executive Agencies, with additional actions delivered by Union bodies or other bodies entrusted with budget implementation under indirect management established under articles 185 and 187 of the TFEU and targeted at specific priorities.

¹⁰ Details of management modes and references to the Financial Regulation may be found on the BudgWeb site:
<https://myintracomm.ec.europa.eu/budgweb/EN/man/budgmanag/Pages/budgmanag.aspx>

The types of implementing bodies expected to be established/renewed for Horizon Europe are:

- Executive Agencies;
- Joint Undertakings (Art. 187 TFEU);
- Public-public partnerships (Art. 185 TFEU);
- European Institute of Innovation and Technology

Some rationalisation will be done at the level of the partnerships (which will be presented under a new common term ‘European Partnerships’), with the main focus on streamlining the current structure and number of existing entities and to make the partnership landscape more coherent both internally (within the FP) and externally (better co-ordination with other Union programmes and external partners). However, this rationalisation will not have impact on the actual legal forms used.

2. MANAGEMENT MEASURES

2.1. Monitoring and reporting rules

Specify frequency and conditions.

Short, medium and long term indicators have been set on the basis of a number of impact pathways. Reporting rules for participants have been designed with these indicators in mind, but also with a conscious intention to limit the administrative burden for participants. Wherever possible data will be collected from open sources.

All data on the management processes (applications, success rates, time to grant, type of beneficiaries, etc.) will be collected and stored, and made available in real time via a dedicated data storage. Today, the reference system (CORDA) works well, and is available for Member States and other interested bodies.

Report will be produced giving information on management processes (from year one) and, progressively, information on outputs and results. An interim evaluation and a final evaluation are planned.

In addition, the JRC's direct actions are assessed internally by means of an annual internal evaluation and externally through peer review by a number of top-level experts selected in consultation with the JRC's Board of Governors.

2.2. Management and control system(s)

2.2.1. *Justification of the management mode(s), the funding implementation mechanism(s), the payment modalities and the control strategy proposed*

The Framework Programme for Research & Innovation will be implemented through direct and Indirect Management. There are no fundamental changes from the Horizon 2020 Framework Programme. However, further simplification measures will be implemented whenever it is possible.

Under Horizon 2020, to end February 2018, 154 000 proposals have been received (with 537 000 individual applications), 18 000 contracts signed (with 79 000 individual participations). Despite the dramatic increase in the number of proposals compared to Seventh Framework Programme, 95 % of contracts have been signed within the 8 month limit set by the legislation. The common IT systems and business processes have ensured efficiency at all levels. A Common Support Centre provides cost effective services to all Commission services responsible for the implementation of the previous Framework Programmes, with running costs of around 0.7 % of expenditure in 2017. Validation of Legal Entities and organisation of project evaluations has been centralised in the Research Executive Agency, giving economies of scale, and ensuring efficient organisation of evaluations.

The narrower estimate of the costs of the control system (evaluation, selection, project management, ex-ante and ex-post control) are in the range of 3-4 % across the Commission services responsible for the implementation of the previous Framework Programmes for 2017 (including costs for the management of Seventh Framework Programme and Horizon 2020). This is considered to be a reasonable cost in the light of the efforts needed to ensure that objectives are achieved and the number of transactions.

This control strategy is based on:

- procedures for selecting the best projects and translating them into legal instruments;
- project and contract management throughout the lifetime of every project;
- ex-ante checks on 100 % of claims,
- certificates on the financial statements above a certain threshold, and certification on methodologies to calculate unit costs or ex-ante assessment on Large Research Infrastructure on a voluntary basis;
- ex post audits (representative and risk-based) on a sample of paid claims;
- and scientific evaluation of project results.

The first indications from Horizon 2020 audits are that error rates have been maintained well within the expected range (see section 2.2.2). This demonstrates that, even if it can still be further developed, simplification measures already introduced have been effective.

In indirect management, the Commission will make use of the following bodies to implement the budget where this is appropriate and cost-effective and provides strong leverage effect:

- Institutionalised European Partnerships (Article 185 or Article 187 TFEU).

These bodies are subject to regular evaluations to ensure that they remain pertinent to achieving the objectives of the Programme. Control strategies for the supervision of bodies operating under indirect management have been, or will be, developed.

In direct management, the Commission will continue to rely to a large extent on Executive Agencies, established in accordance with the Council Regulation 58/2003. The delegation of activities to the Executive Agencies is subject to a mandatory independent ex-ante Cost-Benefit Analysis and the Executive Agencies undergo regular evaluations performed by external experts. The above mentioned Cost-Benefit Analysis will also consider the costs of control and supervision. Interim evaluations conducted in 2012 and in 2015 confirm the high efficiency and added value of the Executive Agencies in programme implementation.

2.2.2. *Information concerning the risks identified and the internal control system(s) set up to mitigate them*

The basic funding model to date has been the reimbursement of eligible costs. As the European Court of Auditors has consistently pointed out, most recently in its 2016 Annual Report, 'the principal risk to the regularity of transactions is that beneficiaries declare ineligible costs which are neither detected nor corrected before [reimbursement]. This risk is particularly high for the Seventh Framework Programme, which has complex eligibility rules that are often misinterpreted by beneficiaries (especially those less familiar with the rules, such as SMEs, first-time participants and non-EU entities)!'.

The Court recognised the value of the simplifications introduced in Horizon 2020. It did however recommend, in its 2016 Annual Report, the wider use of Simplified Cost Options (SCOs). Such SCOs are already in use in parts of the programme, or for specific types of expenditure.

For grants, the estimated representative rate of error for Seventh Framework Programme was 5 %, with a 'residual' error rate of around 3 %, after taking account

of all recoveries and corrections that have been or will be implemented. However, the error rates were lower in those parts of the programme where it was possible to use Simplified Cost Options (SCOs) more widely and/or where a small and stable group of beneficiaries were involved. This included the European Research Council grants and Marie Curie Actions.

The first results of Horizon 2020 suggest a representative error rate of around 3 %, with a residual error rate less than 2.5 %. Note, however, that this is an early estimate which should be used with care, it is likely to rise, perhaps to the 3-4 % level (the level or error anticipated by the Commission for its Horizon 2020 proposal was 3.5 %, although this did not take account of various additional complexities added during the legislative process). The residual error rate should remain some way below 3 %, it is too early to say whether a rate of 2 % will be attained. The Commission still considers that the error rates for European Research Council grants and Marie Skłodowska-Curie Actions will remain below 2 %.

Some errors arise because beneficiaries have not understood the rules. These errors can be addressed by simplification, although some complexity will always remain. Other errors arise because beneficiaries have not followed the rules. Although this is a minority of cases, simplification of the current rules will not resolve them.

An analysis of error rates¹¹ has been carried out for the Horizon 2020 audits so far performed shows that:

-Around 63 % of the error relates to errors in the charging of personnel costs. Regular problems identified are incorrect calculation of productive hours; incorrect rates or incorrect number of hours charged.

-Around 22 % of the error relates to other direct costs (not personnel). The most regular error identified is the lack of direct measurement of costs.

-Around 6 % of the error relates to sub-contracting costs, 4 % to travel costs and 5 % to other categories. Note that errors relating to indirect costs, that constitute 28 % of the error in Seventh Framework Programme, have been reduced to almost zero thanks to the introduction of the flat rate to cover the indirect costs.

The errors identified during audits of Horizon 2020 show that some could be avoided by simplifications and the avoidance of unnecessary formalism in rules. Some changes have already been made in Horizon 2020 (new rules for internal invoicing and additional remuneration for example), and others will be made where possible in Horizon Europe. However, such changes will now be limited in their effect on the error rate, generally only avoiding small errors.

The wider use of SCOs such as flat rates and unit costs, as well as continuing simplification of the rules, will assist in lowering the Horizon 2020 error rate, estimated at 3-4 % on a representative basis in Horizon Europe. However, the underlying problem of errors in a funding method based on the reimbursement of eligible costs remains. In such a system the representative error rate might be reduced to 2.5-3.5 %, with the residual error rate, after corrections, expected to be around (but not necessarily below) 2 %.

Horizon 2020 saw the introduction of lump sum funding for the SME stage 1 scheme (a payment of EUR 50 000 on delivery of a satisfactory scientific deliverable) and,

¹¹ % of the value in EUR vs all adjustments in direct costs in favour of the EU Budget

by EIT KICs, for the funding of institutional costs related to delivery of EIT Labelled masters programmes. No additional justification for these payments, such as invoices, timesheets, proofs of payment, etc, is required. There are no financial errors.

Lump sum funding was proposed for Horizon 2020 but was considered to be unsuitable or premature. Nevertheless, the Commission is, in the Work Programme 2018, implementing pilot schemes based on lump sum funding. At the same time it has undertaken a number of communication actions to allay the concerns of stakeholders about this form of funding.

The pilot scheme has to be evaluated, especially to see if it achieves all the objectives of the Programme (not just lowering the error rate). But, clearly, wider use of flat rate funding would reduce the error rate. However, it would move the risks to other stages of the internal control system – evaluation will become more important, as will the assessment of the deliverable.

The Horizon Europe proposal allows the Commission to use the lump sum funding model and the Commission intends to use this funding model more widely. However, it is too early to say how widely it can be used. This will depend on the results of the pilots currently under way.

The number of transactions involved means that a high level of systematic ex-ante control would be very expensive. The current control strategy therefore relies on risk-based ex ante controls and ex-post controls to assess the level of error and to detect and recover ineligible amounts. As the error rates have remained within the range established this control strategy is considered to be effective. Further development of some aspects is included, for example the inclusion of systems and processes audit, but radical change is not proposed.

2.2.3. *Estimation and justification of the cost-effectiveness of the controls (ratio of "control costs ÷ value of the related funds managed"), and assessment of the expected levels of risk of error (at payment & at closure)*

The narrower estimate of the costs of the control system (evaluation, selection, project management, ex-ante and ex-post control) are in the range of 3-4 % across the Commission services responsible for the implementation of the previous Framework Programmes for 2017 (including costs for the management of the Seventh Framework Programme and Horizon 2020). This is considered to be a reasonable cost in the light of the efforts needed to ensure that objectives are achieved and the number of transactions.

The expected risk of error at payment for grants with a funding model based on the reimbursement of ineligible costs is 2.5-3.5 %. The risk of error at closure (after the effect of controls and corrections) is around (but not necessarily below) 2 %.

The expected risk of error for grants with a funding model based on lump sum funding is close to 0 % (at payment and at closure).

The overall expectation for error rates will depend on the balance between the two methods of funding (reimbursement of eligible costs and lump sums). The Commission aims to apply the lump sum funding model where appropriate. However, the main driver to adopt lump sum funding will not be reduction of the error rate, but the achievement of all the objectives of the programme.

This scenario is based on the assumption that the measures of simplification are not subject to substantial modifications in the decision making process.

Note: this section only concerns the process of grant management (in the different management modes), for administrative and operational expenditure implemented through public procurement processes the risk of error at payment and closure should be below 2 %.

2.3. Measures to prevent fraud and irregularities

Specify existing or envisaged prevention and protection measures, e.g. from the Anti-Fraud Strategy.

The services charged with the implementation of the research and innovation budget are determined to fight against fraud at all stages of the grant management process. They have developed, and are implementing, anti-fraud strategies, including an enhanced use of intelligence, especially using advanced IT tools, and training and information for staff. These efforts will continue. Overall the measures proposed should have a positive impact on the fight against fraud, especially the greater emphasis on risk based audit and reinforced scientific evaluation and control.

The current Anti-Fraud Strategy of the Commission services responsible for the implementation of the previous Framework Programmes, covering grants, as well as the anti-fraud strategies relating to other expenditure, will be updated after the revision of the Commission's Anti-Fraud Strategy in 2018. This will also cover risks related to lump sum funding, which has different risks that need to be taken into account.

It should be underlined that detected fraud has been very low in proportion to total expenditure, nevertheless the Directorates General charged with the implementation of the research budget remain committed to combat it.

The legislation will ensure that audits and on-the-spot checks can be carried out by the Commission services, including OLAF, using the standard provisions recommended by OLAF.

3. ESTIMATED FINANCIAL IMPACT OF THE PROPOSAL/INITIATIVE

3.1. Heading of the multiannual financial framework and new expenditure budget line(s) proposed

Heading of multiannual financial framework	Budget line ¹²	Type of expenditure	Contribution			
	Heading 1. Single Market, Innovation and Digital	Diff./Non-diff. ¹³	from EFTA countries ¹⁴	from candidate countries ¹⁵	from third countries	within the meaning of Article [21(2)(b)] of the Financial Regulation
H1	01.010101 Expenditure related to officials and temporary staff implementing research and innovation programmes – Horizon Europe 01.010102 External personnel implementing research and innovation programmes – Horizon Europe 01.010103 Other management expenditure for research and innovation programmes – Horizon Europe	Non-diff.	YES	YES	YES	NO
	01.0201 Open Science 01.0202 Global Challenges and Industrial Competitiveness 01.0203 Open Innovation 01.0204 Strengthening the European Research Area	Diff.				

¹² The estimated financial impact for operational expenditure is presented at the level of budget articles for the four programme parts. A further breakdown of the budget, based on the strategic planning, might be submitted as part of the annual budgetary procedures.

¹³ Diff. = Differentiated appropriations / Non-diff. = Non-differentiated appropriations.

¹⁴ EFTA: European Free Trade Association.

¹⁵ Candidate countries and, where applicable, potential candidates from the Western Balkans.

3.2. Estimated impact on expenditure

3.2.1. Summary of estimated impact on expenditure

EUR million (to three decimal places)

Heading of multiannual financial framework			1 Single Market, Innovation and Digital								
			2021	2022	2023	2024	2025	2026	2027	Post 2027	TOTAL
Operational appropriations	Commitments	(1)	11 825.394	12 064.784	12 307.891	12 556.625	12 812.890	13 070.006	13 336.556		87 974.145
	Payments	(2)	2 787.096	6 858.177	8 316.885	10 284.251	11 653.515	12 675.793	13 334.400	22 064.028	87 974.145
01 02 01 Open Science	Commitments	(1a)	3 308.230	3 375.270	3 443.480	3 513.155	3 584.895	3 656.900	3 731.270		24 613.200
	Payments	(2a)	779.708	1 918.658	2 326.884	2 877.379	3 260.516	3 546.602	3 730.666	6 172.787	24 613.200
01 02 02 Global Challenges and Industrial Competitiveness	Commitments	(1b)	6 516.841	6 648.652	6 782.307	6 919.237	7 060.382	7 201.957	7 349.169		48 478.545
	Payments	(2b)	1 535.937	3 779.399	4 583.050	5 667.062	6 421.523	6 984.734	7 347.981	12 158.860	48 478.545
01 02 03 Open Innovation	Commitments	(1c)	1 731.049	1 766.131	1 801.820	1 838.279	1 875.818	1 913.494	1 952.410		12 879.000
	Payments	(2c)	407.986	1 003.950	1 217.555	1 505.605	1 706.084	1 855.780	1 952.094	3 229.946	12 879.000
01 02 04 Strengthening the European Research Area	Commitments	(1d)	269.274	274.731	280.283	285.955	291.794	297.655	303.708		2 003.400
	Payments	(2d)	63.465	156.170	189.398	234.206	265.391	288.677	303.659	502.436	2 003.400
Appropriations of an administrative nature financed from the envelope of the programme ¹⁶	Commitments = Payments	(3)	823.606	840.216	857.109	874.375	892.110	909.994	928.444		6 125.855
01 01 01 01 Expenditure related to officials and temporary staff implementing research and innovation programmes - Horizon Europe	Commitments = Payments	(3)	332.455	341.797	351.421	361.335	371.548	382.070	392.912		2 533.539

¹⁶ Technical and/or administrative assistance and expenditure in support of the implementation of EU programmes and/or actions (former 'BA' lines), indirect research, direct research.

01 01 01 02 External personnel implementing research and innovation programmes - Horizon Europe	Commitments = Payments	(3)	68.862	70.239	71.643	73.076	74.538	76.029	77.549		511.937
01 01 01 03 Other management expenditure for research and innovation programmes - Horizon Europe	Commitments = Payments	(3)	422.289	428.181	434.044	439.964	446.024	451.895	457.982		3 080.380
TOTAL appropriations for the envelop of the programme	Commitments	=1+3	12 649.000	12 905.000	13 165.000	13 431.000	13 705.000	13 980.000	14 265.000		94 100.000
	Payments	=2+3	3 610.702	7 698.393	9 173.995	11 158.626	12 545.625	13 585.787	14 262.844	22 064.028	94 100.000

Heading of multiannual financial framework	7	‘Administrative expenditure’
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EUR million (to three decimal places)

		2021	2022	2023	2024	2025	2026	2027	<i>Post 2027</i>	TOTAL
Human resources										
Other administrative expenditure										
TOTAL appropriations under HEADING 7 of the multiannual financial framework	(Total commitments = Total payments)									

EUR million (to three decimal places)

		2021	2022	2023	2024	2025	2026	2027	<i>Post 2027</i>	TOTAL
TOTAL appropriations across HEADINGS of the multiannual financial framework	Commitments	12 649.000	12 905.000	13 165.000	13 431.000	13 705.000	13 980.000	14 265.000		94 100.000
	Payments	3 610.702	7 698.393	9 173.995	11 158.626	12 545.625	13 585.787	14 262.844	22 064.028	94 100.000

3.2.2. Summary of estimated impact on appropriations of an administrative nature

- The proposal/initiative does not require the use of appropriations of an administrative nature
- The proposal/initiative requires the use of appropriations of an administrative nature, as explained below:

EUR million (to three decimal places)

Years	2021	2022	2023	2024	2025	2026	2027	TOTAL
-------	------	------	------	------	------	------	------	-------

HEADING 7 of the multiannual financial framework								
Human resources								
Other administrative expenditure								
Subtotal HEADING 7 of the multiannual financial framework								

Outside HEADING 7¹⁷ of the multiannual financial framework								
Human resources ¹⁸	401.317	412.035	423.065	434.411	446.086	458.099	470.462	3 045.475
Other expenditure of an administrative nature ¹⁹	422.289	428.181	434.044	439.964	446.024	451.895	457.982	3 080.380
Subtotal outside HEADING 7 of the multiannual financial framework	823.606	840.216	857.109	874.375	892.110	909.994	928.444	6 125.855

TOTAL	823.606	840.216	857.109	874.375	892.110	909.994	928.444	6 125.855
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The administrative appropriations required will be met by the appropriations which are already assigned to management of the action and/or which have been redeployed, together if necessary with any additional

¹⁷ Technical and/or administrative assistance and expenditure in support of the implementation of EU programmes and/or actions (former 'BA' lines), indirect research, direct research.

¹⁸ These figures include only the authorised staff in place in 2020 in Directorates General and do not include the necessary staff that will be needed for executive agencies, Joint Undertakings, and other decentralised bodies, as well as the additional staff paid from the contributions of the future associated countries.

¹⁹ These figures represent the estimated maximum administrative expenditures needed for the implementation of the legal base. These figures include also the subsidies needed by the executive agencies (including staff expenditure) that will implement part of Horizon Europe. In this context, these amounts will be adjusted as a result of the envisaged externalisation procedure.

allocation which may be granted to the managing DG under the annual allocation procedure and in the light of existing budgetary constraints.

3.2.2.1. Estimated requirements of human resources

- The proposal/initiative does not require the use of human resources.
- The proposal/initiative requires the use of human resources, as explained below:

Estimate to be expressed in full time equivalent units

Years	2021	2022	2023	2024	2025	2026	2027
• Establishment plan posts (officials and temporary staff)²⁰							
Headquarters and Commission's Representation Offices							
Delegations							
Research	2620	2620	2620	2620	2620	2620	2620
• External staff (in Full Time Equivalent unit: FTE) - AC, AL, END, INT and JED^{20 21}							
Financed from HEADING 7 of the multiannual financial framework	- at Headquarters						
	- in Delegations						
Financed from the envelope of the programme ²²	- at Headquarters						
	- in Delegations						
Research	1184	1184	1184	1184	1184	1184	1184
Other (specify)							
TOTAL	3804	3804	3804	3804	3804	3804	3804

Description of tasks to be carried out:

Officials and temporary staff	The total number of officials and temporary agents will be used to contribute to the objectives of Horizon Europe during all the process, from the preparation of the Work Programme to the final dissemination of results during 2021-2027.
External staff	The total number of external personnel will assist officials and temporary agents to contribute to the objectives of Horizon Europe during all the process, from the preparation of the Work Programme to the final dissemination of results during 2021-2027.

The human resources required will be met by staff from the DG who are already assigned to management of the action and/or have been redeployed within the DG, together if necessary with any additional allocation which may be granted to the managing DG under the annual allocation procedure and in the light of budgetary constraints.

²⁰ These figures include only the authorised staff in place in 2020 in Directorates General and do not include the necessary staff that will be needed for executive agencies, Joint Undertakings, and other decentralised bodies, as well as the additional staff paid from the contributions of the future associated countries.

²¹ AC= Contract Staff; AL = Local Staff; END = Seconded National Expert; INT = agency staff; JPD= Junior Professionals in Delegations.

²² Sub-ceiling for external staff covered by operational appropriations (former 'BA' lines).

3.2.3. Third-party contributions

The proposal/initiative:

- does not provide for co-financing by third parties
- provides for the co-financing by third parties estimated below:

Appropriations in EUR million (to three decimal places)

Years	2021	2022	2023	2024	2025	2026	2027	TOTAL
Specify the co-financing body								
TOTAL appropriations co-financed ²³	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.

3.3. Estimated impact on revenue

- The proposal/initiative has no financial impact on revenue.
- The proposal/initiative has the following financial impact:
 - on own resources
 - on other revenue

please indicate, if the revenue is assigned to expenditure lines

EUR million (to three decimal places)

Budget revenue line:	Impact of the proposal/initiative						
	2021	2022	2023	2024	2025	2026	2027
Item 6011	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.	p.m.
Item 6012							
Item 6013							
Item 6031							

For assigned revenue, specify the budget expenditure line(s) affected.

01.02XX Appropriations accruing from contributions from third parties

Other remarks (e.g. method/formula used for calculating the impact on revenue or any other information).

Third countries may contribute to the Programme through association agreements. The conditions determining the level of financial contribution will be laid down in association agreements with each country and shall ensure an automatic correction of any significant imbalance compared to the amount that entities established in the associated country receive through participation in the programme, taking into account the costs in managing the programme.

²³ Bilateral Association Agreements are not fixed yet. Contributions from associated countries will come on top of the amounts presented in this Legislative Financial Statement.