

**HORIZON EUROPE (DAN NICA)**  
**FINAL COMPROMISE AMENDMENTS (19 November 2018)**

*On the Proposal for a*

**REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**establishing Horizon Europe – the Framework Programme for Research and Innovation,  
laying down its rules for participation and dissemination**

(with Annexes)

**CA R1**

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 Article 173(3), Article 182(1), Article 183, and the second paragraph of Article 188 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 Committee<sup>1</sup>,

Having regard to the opinion of the Committee of the Regions<sup>2</sup>,

Acting in accordance with the ordinary legislative procedure<sup>3</sup>,

Whereas:

- (1) It is the Union's objective to strengthen its scientific *excellence* and technological bases *in which researchers, scientific knowledge and technology circulate freely* and encourage its competitiveness, including in its industry, *to strengthen the European Research Area*, while promoting all research and innovation activities to deliver on the Union's strategic priorities *and commitments*, which ultimately aim at promoting peace, the Union's values and the well-being of its people.

**CA R2**

- (2) To deliver scientific, economic and societal impact in pursuit of this general objective *and maximize the Union's added value of its RDI investments*, the Union should invest in research and innovation through Horizon Europe - a Framework Programme for Research and Innovation 2021-2027 (the 'Programme') to support the creation, diffusion *and transfer* of high-quality knowledge and technologies *in the Union*, to strengthen the impact of research and innovation *in addressing global challenges including the Sustainable Development Goals and climate change*, and in developing, supporting and implementing Union policies, to support the uptake of innovative *and sustainable* solutions in *the Union's* industry and society to *create jobs* and boost *economic growth and industrial competitiveness*. *The Programme should* foster all forms of innovation, strengthen market deployment of innovative solutions and optimise the delivery of investments.

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

<sup>2</sup> OJ C [...], [...], p. [...].

<sup>3</sup> Position of the European Parliament of ... [(not yet published in the Official Journal)] and decision of the Council of ....

## CA R2a

***2a new*** ***The Programme will contribute to the achievement of an overall 3 % of the EU GDP invested in research and development, in line with the EU2020 headline target. The achievement of the target will require Member States and private sector to complement the Programme with their own and reinforced investment actions in research, development and innovation.***

## CA R3

- (3) The promotion of research and innovation activities deemed necessary to help realise Union policy objectives should take into account the innovation principle as ***key driver to turn faster and more intensively the Union's substantial knowledge assets into innovations.***

## CA R4

- (4) ***The continuation of “Open Science, Open Innovation, Open to the World” while safeguarding the Union's scientific and socio-economic interests*** should ensure excellence and impact of the Union's investment in research and innovation ***and strengthen R&I capacity of all Member States. That*** should lead to a balanced implementation of the Programme.

## CA R5

- (5) Open science has the potential to increase the quality, impact and benefits of science and to accelerate the advancement of knowledge by making it more reliable, more efficient and accurate, better understandable by society and responsive to societal challenges. Provisions should be laid down to ensure that beneficiaries provide open access to peer-reviewed scientific publications, research data and other research outputs in an open and non-discriminatory manner, free of charge and as early as possible in the dissemination process, and to enable their widest possible use and re-use. ***As far as research data is concerned, the principle should be “as open as possible, as closed as necessary”, thereby recognising the need for different access regimes because of the Union's socio-economic interest, intellectual property rights, personal data protection and confidentiality, security concerns and other legitimate interests.*** More emphasis should be given to the responsible management of research data, which should comply with the FAIR principles of ‘Findability’, ‘Accessibility’, ‘Interoperability’ and ‘Reusability’, notably through the mainstreaming of Data Management Plans. Where appropriate, beneficiaries should make use of the possibilities offered by the European Open Science Cloud and ***the European Data Infrastructure and*** adhere to further open science principles and practices. ***Reciprocal open access should be encouraged in international S&T cooperation agreements and in relevant association agreements.***

## CA R5a

- (5 a) ***SME beneficiaries are encouraged to make use of the existing instruments such as IPR SME Helpdesk that supports European Union small and medium sized enterprises to both protect and enforce their Intellectual Property (IP) rights through the provision of free information and services, in the form of confidential advice on intellectual property and related issues, plus training, materials and online resources.***

## CA R6

- (6) The conception and design of the Programme should respond to the need for establishing a critical mass of supported activities, *throughout the Union and through international cooperation, while encouraging the participation of all Member States in the Programme*, in line with the UN Sustainable Development Goals (SDGs) *and the Paris Agreement*. Programme implementation should reinforce the pursuit of this aim.

## CA R7

- (7) Activities supported under the Programme should contribute towards the achievement of the Union's *and Programme's* objectives, priorities *and commitments*, the monitoring and assessment of progress against those objectives priorities *and commitments* and for the development of revised or new priorities.
- (7a) *The Programme should seek alignment with already existing European research and innovation roadmaps and strategies.*

## CA R8

- (8) The Programme should maintain a balanced approach between bottom-up (investigator or innovator driven) and top-down (determined by strategically defined priorities) funding, according to the nature of the research and innovation communities that are engaged *across the Union*, the *success rates per area of intervention*, the types and purpose of the activities carried out, *the subsidiarity principle* and the impacts that are sought. The mix of these factors should determine the choice of approach for the respective parts of the Programme, all of which contribute to all of the Programme's general and specific objectives.

## CA R8a

- (8 a) *A number of research and innovation actions will apply a Fast Track to Research and Innovation logic where time-to-grant should not exceed six months. This should allow a faster, bottom-up access to funds for small collaborative consortia covering actions from fundamental research to market application.*

## CA R8b

- (8b) *The Programme should support all stages of research and innovation especially within collaborative projects. Fundamental research is an essential asset and an important condition to increase the Union's ability to attract the best scientists in order to become a global hub of excellence. The balance between basic and applied research should be ensured. Coupled with innovation, this will support the Union's economic competitiveness, growth and jobs.*

## CA R8c

- (8 c) *In order to maximize the impact of Horizon Europe particular consideration should be given to multidisciplinary, interdisciplinary and transdisciplinary approaches as necessary elements for major scientific progress.*

## CA R8d

- (8 d) *The engagement with society is to be fostered through responsible research and innovation as a cross-cutting element with a view to build effective cooperation between science and society. It would allow all societal actors (researchers, citizens, policy makers, business, third sector organisations etc.) to work together during the whole research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of European society.*

## CA R9

- (9) Research activities carried out under the pillar '*Excellent and Open Science*' should be determined according to the needs and opportunities of science. The research agenda should be set in close liaison with the scientific community *and include emphasis on attracting new R&I talents, young researchers, while strengthening the ERA and avoiding brain drain.* Research should be funded on the basis of excellence

## CA R10

- (10) The pillar 'Global Challenges and *European Industrial Competitiveness*' should be established through clusters of research and innovation activities, in order to maximise integration across the respective work areas while securing high and sustainable levels of impact *for the Union* in relation to the resources that are expended. It will encourage cross-disciplinary, cross-sectoral, cross-policy and cross-border collaboration in pursuit of the UN SDGs *and the Union's commitments under the Paris Agreement and where needed to address societal challenges*, and the competitiveness of the Union's industries therein. *The activities under this pillar should cover the full range of research and innovation activities including R&D, piloting, demonstration, and support for public procurement, pre-normative research and standard setting, and market uptake of innovations to ensure that Europe stays at the cutting-edge or research in strategically defined priorities.*

## CA R11

- (11) Full *and timely* engagement of industry in the Programme, at all levels from the individual entrepreneur and small and medium-sized enterprises to large scale enterprises, should *continue* specifically towards the creation of sustainable jobs and growth *in Europe strengthening private-public cooperation and enhancing R&I investments from the private sector.*
- (11 a) *Multi-stakeholders consultations, including civil society and* industry, should contribute to the perspectives and priorities established through the strategic planning process. This should *result in periodic Strategic R&I Plans adopted by means of delegated acts. Those strategic plans should then be implemented through* the development of work programmes.

## CA R12

- (12) It is important to support the *Union's* industry to stay or become world leader in innovation, digitisation and decarbonisation, notably through investments in key enabling technologies that will underpin tomorrow's business. *KETs are set to play a central role in Pillar II 'Global Challenges and European Industrial Competitiveness' and should be further connected to the FET Flagships to allow research projects to cover the whole innovation chain.* The Programme's *actions should reflect the Union's Industrial Policy*

*Strategy so as to address market failures or sub-optimal investment situations, to boost investments in a proportionate and transparent manner, without duplicating or crowding out private financing and have a clear European added value and public return on investments. This will ensure consistency between the actions of the Programme and EU RDI State aid rules, which should be revised in order to incentivise innovation.*

#### CA R12a

*12 a new SMEs constitute a significant source of innovation and growth in Europe. Therefore a strong participation of SMEs as defined in Commission Recommendation 2003/361/EC is needed in Horizon Europe. Building on best practices from Horizon 2020, Horizon Europe should continue to encourage SMEs participation to the Framework Programme in an integrated manner. Adequate measures and budget provisions, including the implementation of a fully bottom-up monobeneficiary SMEs performing incremental innovation, with dedicated open calls through-out the different stages of the innovation cycle should be foreseen.*

#### CA R13

- (13) The Programme should support research and innovation in an integrated manner, respecting all relevant provisions of the World Trade Organisation. The concept of research, including experimental development should be used in accordance with the Frascati Manual developed by the OECD, whereas the concept of innovation should be used in accordance with the Oslo Manual developed by the OECD and Eurostat, following a broad approach that covers social innovation, design and creativity. The OECD definitions regarding Technological Readiness Level (TRL) should be taken into account, as in the previous Framework Programme Horizon 2020. The work programme for a given call under the pillar 'Global Challenges and Industrial Competitiveness' could allow grants for large-scale product validation and market replication.

#### CA R14

- (14) The Commission's Communication on the interim evaluation of Horizon 2020 (COM(2018) 2 final) *and the European Parliament's report on the assessment of Horizon 2020 implementation in view of its interim evaluation and the Framework Programme 9 proposal (2016/2147(INI))* have provided a set of recommendations for this Programme, including its Rules for participation and dissemination, building on the lessons learnt from the previous Programme as well as input from EU institutions and stakeholders. Those recommendations include to invest more ambitiously in order to reach critical mass and maximise impact; to support breakthrough innovation; to prioritise Union research and innovation (R&I) investments in areas of high added value, notably through mission-orientation, *full, well-informed and timely* citizen involvement and wide communication; to rationalise the Union funding landscape *in order to fully use the R&I potential of all Member States*, including by streamlining the range of partnership initiatives and co-funding schemes; the development of more and concrete synergies between different Union funding instruments, notably with the aim of helping to mobilise under-exploited R&I potential across the Union; to *better involve research infrastructures financed by the Union - especially from ERDF - into the Programme's projects*, to strengthen international cooperation and reinforce openness to third countries' participation *while safeguarding Union interest and broadening participation of all Member States in the Programme*; and to continue simplification based on implementation experiences from Horizon 2020.

## CA R15

- (15) *Cohesion policy should continue to contribute to research and innovation. Therefore, special attention needs to be paid to the coordination and complementarity between the two Union policies.* The Programme should seek **alignment of rules and synergies** with other Union programmes *as referred to in Annex IV of this regulation*, from their design and strategic planning, to project selection, management, communication, dissemination and exploitation of results, to monitoring, auditing and governance. With a view to avoiding overlaps and duplication and increasing the leverage of Union funding, *as well as decreasing administrative burden for the applicants and the beneficiaries, all types of synergies should follow the principle “one action follows one set of rules”*:
- transfers from other Union programmes *including European Regional Development Fund (ERDF)*, to Horizon Europe activities can take place *on a voluntary basis*. In such cases they will follow Horizon Europe rules, *but they will be used only for the benefit of the Member State or managing authority, as relevant, deciding to make the transfer*;
  - *co-funding of an action by Horizon Europe and another Union programme could also be foreseen while not exceeding the total eligible costs of the action. In such cases, only Horizon Europe rules would apply and double audits should be avoided*;
  - *Seals of Excellence should be awarded to all proposals which have passed the “excellence” threshold in Horizon Europe but cannot be financed due to budgetary constraints. In such cases, the rules of the Fund providing support should apply with the exception of State Aid Rules.*

## CA R16

- (16) In order to achieve the greatest possible impact of Union funding and the most effective contribution to the Union's policy objectives **and commitments**, the Programme *may* enter into European Partnerships with private and/or public sector partners, *on the basis of the outcome of the Strategic Planning*. Such partners include **public and private research and innovation stakeholders, competence centres, business incubators, science and technology parks** bodies with a public service mission, *foundations and civil society organisations and regional innovation ecosystems, where appropriate* that support and/or carry out research and innovation, provided that desired impacts can be achieved more effectively in partnership than by the Union alone.

## CA R17

- (17) The Programme should strengthen cooperation between European Partnerships and private and/or public sector partners at the international level including by joining up research and innovation programmes and cross-border investment in research and innovation bringing mutual benefits to people and businesses while ensuring that the **Union** can uphold its interests.
- (17 a) *FET Flagships' have proven to be an effective and efficient instrument, delivering benefits for society in a joint, coordinated effort by the Union and its Member States, and existing flagships that have proven their benefits should continue to be supported.*

## CA R18

- (18) The Joint Research Centre (JRC) should continue to provide Union policies with independent customer-driven scientific evidence and technical support throughout the

whole policy cycle. The direct actions of the JRC should be implemented in a flexible, efficient and transparent manner, taking into account the relevant needs of the users of the JRC, *the budgetary constraints* and the needs of Union policies, and ensuring the protection of the financial interests of the Union. The JRC should continue to generate additional resources.

#### CA R19

- (19) The pillar '*Innovative Europe*' should establish a series of measures for integrated support to the needs of entrepreneurs and research driven entrepreneurship aiming at realising and accelerating breakthrough innovation for rapid market growth *as well as promoting the Union's technological autonomy in strategic areas*. It should attract innovative companies, *including SMEs and start-ups*, with potential for scaling up at international and at Union level and offer fast, flexible grants and co-investments, including with private investors. These objectives should be pursued through the creation of a European Innovation Council (EIC). This Pillar should also support the European Institute of Innovation and Technology (EIT), the EIT Regional Innovation Scheme and European innovation ecosystems at large, *throughout the Union*, notably through co-funding partnerships with national and regional innovation support actors, both public and private.

#### CA R20

- (20) *In order to address the need to support investment in higher-risk and non-linear activities such as research and innovation, it is essential that Horizon Europe, in particular the EIC, as well as the EIT with its KICs, work in synergy with the financial products to be deployed under InvestEU. In that regard, the experience gained from the financial instruments deployed under Horizon 2020 such as InnovFin and the loan guarantee for SMEs, should serve as a strong basis to deliver this targeted support. EIC will develop strategic intelligence and real time evaluation activities in order to timely manage and coordinate its various actions.*

#### CA R21

- ~~(21) The *EIC's primary focus should be innovation, targeting in particular entrepreneurs, start-ups and SMEs*. Through its instruments — Pathfinder and Accelerator — it should *when possible and potentially efficient in collaboration with the EIT and its KICs and avoiding duplication*, aim at new ideas towards radically new future technologies, at identifying, developing and deploying breakthrough *research targeted towards new technologies and market creating innovations across all sectors and disciplines, targeted towards new technologies* and, *together with InvestEU*, supporting their rapid scale-up to EU and international levels. Through coherent and streamlined support to breakthrough innovation the EIC should *complete* public support and private investment for breakthrough innovation. The instruments of the EIC call for dedicated legal and management features in order to reflect its objectives, in particular market deployment activities. *EIC will develop strategic intelligence and real time evaluation activities in order to timely manage and coordinate orchestrate its various actions. The Commission will ensure sufficient flexibility and resources to ensure this objective.*~~

#### CA R22

- (22) Through EIC blended finance, the *EIC* Accelerator should bridge the “valley of death” between research, pre-mass commercialisation and the scaling-up of companies. In

particular, the Accelerator should provide support to operations presenting such technological or market risks that they are not considered as bankable and cannot leverage significant investments from the market, hence complementing the InvestEU programme established by Regulation ...<sup>4</sup>.

#### CA R23

- (23) The EIT, primarily through its Knowledge and Innovation Communities (KICs) *and the EIT Regional Innovation Scheme* should aim at strengthening innovation ecosystems for the *development of an overall Union capacity for innovation* that tackle global challenges, by fostering the integration of business, research, higher education and entrepreneurship. *In line with its founding act, the EIT Regulation<sup>5</sup> and the Strategic Innovation Agenda of the EIT<sup>6</sup>*, the EIT should foster innovation in its activities and should support the integration of higher education within the innovation ecosystem, in particular by: stimulating entrepreneurial education, fostering strong non-disciplinary collaborations between industry and academia; and identifying prospective skills for future innovators to address global challenges, which includes advanced digital and innovation skills. Support schemes provided by the EIT should benefit to EIC beneficiaries, while start-ups emerging from EIT KICs should have *fast-track* access to EIC actions. While the EIT's focus on innovation ecosystems should make it naturally fit within the pillar '*Innovative Europe*', *it should also support all other pillars, as appropriate*, the planning of its KICs should be aligned through the strategic planning process with the pillar 'Global Challenges and Industrial Competitiveness'. *Duplication between KICs and other instruments in the same field, in particular other Partnerships, should be avoided.*

#### CA R24

- (24) Ensuring and preserving a level playing field for companies that compete in a given market should be a key requirement for breakthrough or disruptive innovation to flourish thereby enabling in particular small and medium-size innovators to reap the benefits of their investment and to capture a share of the market. *Similarly, a certain degree of openness in the innovation scale of funded actions - addressing a large network of beneficiaries - may contribute substantially to the building capacity of SMEs, as it provides them with the necessary means to attract investments and to thrive.*

#### CA R25

- (25) The Programme should promote and integrate cooperation with third countries and international organisations and initiatives based on *Union's* interest, *and* mutual *benefits* and global commitments to implement the UN SDGs. International cooperation should aim to strengthen the Union's *excellence in* research and innovation, attractiveness and economic and industrial competitiveness, to tackle global ~~societal~~ challenges, as embodied in the UN SDGs, and to support the Union's external policies. An approach of general opening for *reciprocal* international participation and targeted international cooperation actions should be followed, appropriate eligibility *criteria, considering different levels of R&I capacities*, for funding of entities established in low to middle income countries *need to be applied*. At the same time, association of third countries to

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<sup>5</sup> Regulation (EU) 294/2008 of the European Parliament and of the Council of 11 March 2008 (OJ L97/1, 9.4.2008), as amended by Regulation (EU) 1292/2013 of the European Parliament and of the Council of 11 December 2013 (OJ L347/174, 20.12.2013).

<sup>6</sup> Regulation (EU) of the European Parliament and of the Council.

the Programme *should* be promoted *where reciprocity is envisaged and where Union's interest is safeguarded and increased participation of all Member States in the Programme is promoted*.

#### CA R26

- (26) *With the aim of deepening the relationship between science and society and maximising benefits of their interactions, the Programme should engage and involve citizens and civil society organisations in co-designing and co-creating responsible research and innovation (RRI) agendas and contents that meet citizens' and civil society's concerns, needs and expectations, promoting science education, making scientific knowledge publicly accessible, and facilitating participation of citizens and civil society organisations in its activities. The measures taken to improve the involvement of citizens and civil society should be monitored.*
- (26a) *Horizon Europe should support new technologies which contribute to overcoming obstacles, that prevent the access and the full participation of persons with disabilities and which consequently restrain the development of a truly inclusive society.*

#### CA R26 b

- (26 b) *With the aim of strengthening of the European Research Area, all parts of the Programme should contribute to significantly reduce the R&I divide, in particular by increasing the participation of widening countries in the Programme. R&I actions; spreading scientific excellence, boosting new R&I cooperation patterns, reducing remuneration gap among researchers within the Union, counterbalance brain-drain, modernising national R&I ecosystems and ensuring balanced representation in the evaluation panels, expert groups and scientific boards*

#### CA R27

- (27) Pursuant to Article 349 of the TFEU, the Union's outermost regions are entitled to specific measures (taking into account their structural, social and economic situation) regarding access to horizontal Union programmes. The Programme should therefore take into account the specific characteristics of those regions in line with the Commission's Communication on 'A stronger and renewed strategic partnership with the EU's outermost regions' (COM (2017) 623 final) as endorsed by the Council on 12 April 2018 *and where possible promote their participation in the Programme.*

#### CA R28

- (28) The activities developed under the Programme should aim at eliminating gender inequalities, *avoiding gender bias, adequately integrating gender dimension in research and innovation content, aiming at enhancing work-life balance*, promoting equality between women and men including equal pay *principles as enshrined in Article 141(3) of the Treaty of the EU and in Directive 2006/54/EC on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation, as well as ensuring accessibility of researchers with disabilities to research and innovation.*

## CA R29

- (29) In light of the specificities of the defence industry sector, the detailed provisions for Union funding to defence research projects should be fixed in the Regulation ... establishing the European Defence Fund<sup>7</sup> which defines the rules of participation for defence research. ***Although synergies between Horizon Europe and the European Defence Fund could be encouraged while avoiding duplication, actions under Horizon Europe should have an exclusive focus on civilian applications.***

## CA R31 en bloc

- (31 a) ***Administrative simplification, in particular the reduction of the administrative burden and delays for beneficiaries should be continuously sought in the definition, implementation, evaluation, reporting and monitoring of the Programme.***
- (31 b) ***In order to ensure that Europe remains at the forefront of the global research and innovation in the digital field and to take account of the necessity to step up investments to benefit from the growing opportunities of digital technologies sufficient budget should be allocated to core digital priorities.***
- (33) Pursuant to [reference to be updated as appropriate according to a new decision on OCTs: Article 94 of Council Decision 2013/755/EU<sup>8</sup>], persons and entities established in overseas countries and territories (OCTs) are eligible for funding subject to the rules and objectives of the Programme and possible arrangements applicable to the Member State to which the relevant overseas country or territory is linked. ***The programme should take due account of the specific features of these territories in order to ensure their effective participation and support cooperation and synergies, particularly with the outermost regions as well as with third countries in their neighbourhood.***
- (34) Pursuant to paragraph 22 and 23 of the Inter-institutional agreement for Better Law-Making of 13 April 2016, there is a need to evaluate this Programme on the basis of information collected through specific monitoring requirements, while avoiding overregulation and administrative burdens, in particular on Member States ***and beneficiaries under the Programme..*** These requirements, where appropriate, can include measurable indicators, as a basis for evaluating the effects of the Programme on the ground.
- (35) In order to be able to supplement or amend the impact pathway indicators where considered necessary, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level, and that those consultations be conducted in accordance with the principles laid down in the Interinstitutional Agreement on Better Law-Making of 13 April 2016. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the Council receive all documents at the same time as Member States' experts, and their experts systematically have access to meetings of Commission expert groups dealing with the preparation of delegated acts.
- (36) Coherence and synergies between Horizon Europe and the EU's Space Programme will foster a globally competitive and innovative European space sector; reinforce Europe's autonomy in accessing and using space in a secure and safe environment; and strengthen

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<sup>8</sup> Council Decision 2013/755/EU of 25 November 2013 on the association of the overseas countries and territories with the European Union (Overseas Association Decision) (OJ L 344, 19.12.2013, p. 1).

Europe's role as a global actor. Breakthrough solutions in Horizon Europe will be supported by data and services made available by the Space Programme.

- (37) The rules for participation and dissemination should adequately reflect the needs of the Programme taking into account the concerns raised and the recommendations made by various stakeholders.
- (38) Common rules *and requirements* across the Programme should ensure *simplified and common implementing tools including for monitoring and reporting and* a coherent framework which facilitates participation in programmes financially supported by the budget of the Programme, including participation in programmes managed by funding bodies such as the EIT, joint undertakings or any other structures under Article 187 TFEU, and participation in programmes undertaken by Member States pursuant to Article 185 TFEU. *Adopting* specific rules should be *possible but exceptions must be limited to when strictly necessary and duly* justified.

#### CA R39

- (39) Actions which fall within the scope of the Programme should respect fundamental rights and observe the principles acknowledged in particular by the Charter of Fundamental Rights of the European Union. Such actions should be in conformity with any legal obligation including international law and with any relevant Commission decisions such as the Commission notice of 28 June 2013<sup>9</sup>, as well as with ethical principles, which include avoiding any breach of research integrity. *The opinions of the European Group on Ethics in Science and New Technologies should be taken into account as well as the opinion of the European Union Agency for Fundamental Rights and the European Data Protection Supervisor.* Article 13 TFEU should also be taken into account in research activities, and the use of animals in research and testing should be reduced, with a view ultimately to replacing their use.

#### CA R40

- (40) In line with the objectives of international cooperation as set out in Articles 180 and 186 TFEU, the participation of legal entities established in third countries and of international organisations should be promoted *in the Union's scientific, societal, economic and technological interests*. The implementation of the Programme should be in conformity with the measures adopted in accordance with Articles 75 and 215 TFEU and should be in compliance with international law. For actions related to Union strategic assets, interests, autonomy or security, the participation to specific actions of the Programme may be limited to entities established in Member States only, or to entities established in specified associated or other third countries in addition to Member States.

#### CA R41

- (41) *Acknowledging climate change as one of the biggest global and societal challenges and* 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 Programme will contribute with at least 35 % of its expenditures supporting climate objectives as appropriate and as part of the general EU objective of mainstreaming climate actions and of spending 30% of the EU budget. In order to monitor and verify this objective, all climate related expenditures must be recorded to cover all EU budget programmes and reflected in the appropriate parts of*

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<sup>9</sup> OJ C 205, 19.7.2013, p. 9.

*the work programmes. Within clean energy technology, their estimated spending on particular technologies should be broken down ensuring international comparability. In order to address the European Court of Auditors 'recommendations [Report 31/2016], climate mainstreaming mechanisms should ex-post differentiate between mitigation and adaptation when reporting.*

#### CA R43

- (43) Use of sensitive background information or access by unauthorized individuals to sensitive results ***and research data*** may have an adverse impact on the interests of the Union or of one or more of the Member States. Thus handling of confidential data and classified information should be governed by all relevant Union law, including the Institutions' internal rules, such as Commission Decision (EU, Euratom) 2015/444, which lays down the provisions on security rules for protecting EU classified information.
- ~~(44) It is necessary to establish the minimum conditions for participation, both as a general rule where the consortium should include at least ***three independent*** legal ***entities each established in a different Member State or associated countries***, and with at least ***two*** of them established in a Member State and with regard to the specificities of particular type of actions under the Programme.~~

#### CA R45

- (45) It is ***necessary*** to establish the terms and conditions for providing Union funding to participants in actions under the Programme. Grants ***will be the main type of financing within the Programme. Other types of financing 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 as set out in the Financial Regulation, with the view to further simplification. ***Before any new costs reimbursement system could be deemed a real simplification for the beneficiaries, it needs to be preceded by an extensive and positive evaluation.***
- ~~(46) The funding rates in this Regulation are referred to as maximums in order to comply with the co-financing principle.~~

#### CA R47

- (47) In accordance with the Financial Regulation, the Programme should provide the basis for a wider acceptance of the usual cost accounting practices of the beneficiaries as regards personnel costs and unit costs for internally invoiced goods and services. ***The usage of unit costs for internally invoiced goods and services combining direct costs and indirect cost should be an option which can be chosen by all beneficiaries. Costs estimated via allocation keys will be eligible.***

#### CA R48

- (48) The current system of reimbursement of actual personnel costs should be further simplified building on the the project-based remuneration approach developed under Horizon 2020 and further aligned to the Financial Regulation, seeking for ***equal pay for equal work as a general principle and aiming closing the remuneration gap among EU researchers involved in the Programme.***

#### CA R49

- (49) The participant Guarantee Fund set up under Horizon 2020 and managed by the Commission has proved to be an important safeguard mechanism which mitigates the risks associated with the amounts due and not reimbursed by defaulting participants. Therefore, the Beneficiary Guarantee Fund, renamed Mutual Insurance Mechanism ("the Mechanism") should be continued and enlarged to other funding bodies in particular to initiatives pursuant to Article 185 of the TFEU. The Mechanism should be opened to beneficiaries of any other directly managed Union programme.

#### CA R50

- (50) Rules governing the exploitation and dissemination of results should be laid down to ensure that beneficiaries protect, exploit, disseminate and provide access to those results as appropriate, ***taking into consideration the legitimate interests of the beneficiaries and any other constraints, such as data protection rules, privacy and security rules or as well as intellectual property rights, confidentiality, or the Union's global economic competitiveness***. More emphasis should be given to exploiting the results, ***especially*** in the Union. Beneficiaries should update their plans regarding the exploitation and dissemination of their results during the action.

#### CA R51

- (51) The key elements of the proposal evaluation and selection system of the predecessor programme Horizon 2020 with its particular focus on excellence, ***'impact' and 'quality and efficiency of implementation' criteria*** should be maintained. Proposals should continue to be selected based on the evaluation made by independent experts ***stemming from as many Member States as possible. The Commission should organise anonymous evaluation where appropriate and analyse its results in order to avoid selection bias***. Where relevant, the necessity to ensure the overall coherence of the portfolio of projects should be taken into account ***by independent experts***.

#### CA R52 en bloc

- (52) ***Systematic*** cross-reliance on audits and assessments with other Union programmes – should be ***implemented in accordance with Article 127 of the Financial Regulation for all parts of the Programme*** in order to reduce administrative burden for beneficiaries of Union funds. Cross reliance should be explicitly provided for by considering also other elements of assurance such as systems and processes audits.
- (53) Specific challenges in the ***areas*** of research ***and*** innovation should be addressed by prizes, including through common or joint prizes where appropriate, organised by the Commission or funding body with other Union bodies, third countries, international organisations or non-profit legal entities. ***In particular, prizes should be awarded to projects attracting scientists to widening countries as well as to successful projects to increase their visibility and allow to increase the promotion of EU funded actions***.
- (54) Financing ***types*** and the methods of implementation under this Regulation 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. ***This should*** include consideration of the use of lump sums, flat rates and scales of unit costs.

## CA 1

### Article 1

#### Subject matter

1. This Regulation establishes Horizon Europe - the Framework Programme for Research and Innovation ('the Programme') and the rules for participation and dissemination in indirect actions under the Programme ***and determines the framework governing Union support to research and innovation activities.***

2. It lays down the objectives of the Programme, the budget for the period 2021 – 2027, the forms of Union funding and the rules for providing such funding.

3. The Programme shall be implemented through:

(a) the specific programme established by Decision .../.../EU<sup>[1]</sup>, which includes ***rationale and intervention areas of*** the EIT;

(b) the specific programme on defence research established by Regulation .../.../EU.

4. The terms 'Horizon Europe', 'the Programme' and 'specific programme' used in this Regulation ***do not*** address matters relevant to the specific programme described in paragraph 3 (b) unless otherwise explicitly stated.

***4 a. The EIT shall implement the Programme in accordance with the Strategic R&I plan and the Strategic Innovation Agenda of the EIT for the period 2021-2027, with the reserve that any new KIC created shall, if possible, entail additional and adequate budgetary resources and not undermine the objectives and the commitments of the existing KICs.***

## CA 2

### Article 2

#### Definitions

For the purposes of this Regulation, the following definitions apply:

- (1) 'research infrastructures' mean facilities that provide resources and services for the research communities to conduct research and foster innovation in their fields. This definition includes the associated human resources, and it covers major equipment or sets of instruments ***in particular those supported by other Union funds as referred to in Annex IV***; knowledge-related facilities such as collections, archives or scientific data infrastructures; computing systems, communication networks, and any other infrastructure, of a unique nature and open to external users, essential to achieve excellence in research and innovation. Where relevant, they may be used beyond research, for example for education or public services and they may be 'single sited', 'virtual' or 'distributed';
- (2) 'smart specialisation strategy' has the same meaning as smart specialisation strategy as defined in Regulation (EU) No 1303/2013 of the European Parliament and of the

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[1]

Council<sup>[2]</sup> and fulfilling the enabling conditions set out in Regulation (EU) XX [Common Provisions Regulation];

- (3) 'European Partnership' means an initiative where the Union, together with private and/or public partners (such as industry, **universities**, research organisations **including research infrastructures**, bodies with a public service mission at local, regional, national or international level or civil society organisations including **non-governmental organisations and foundations**), **where appropriate** commit to jointly support the development and implementation of a programme of research and innovation activities, including those **pursuant to Article 185 and 187 TFUE, and those** related to market, regulatory or policy uptake;
- (4) 'open access' means the practice of providing online access to research outputs resulting from actions funded under the Programme, in particular scientific publications and research data, free of charge to the end-user. **With regard to research data, relevant privacy and security interests, as well as Intellectual Property Rights, confidentiality, European Union global economic competitiveness and other legitimate interests need to be addressed in accordance with the principle “as open as possible, as closed as necessary” and according to “opt-outs”**;
- (5) 'mission' means a portfolio of **excellence-driven R&I** actions **which could be cross-cluster or cross-cutting** intended to achieve a measurable goal within a set timeframe, and **have an** impact for science and technology, **for** society, **policy-making and/or diplomacy** and citizens **and which** could not be achieved through individual actions;
- (6) 'pre-commercial procurement' means the procurement of research and development services involving risk-benefit sharing under market conditions, and competitive development in phases, where there is a clear separation of the research and development services procured from the deployment of commercial volumes of end-products;
- (7) 'public procurement of innovative solutions' means procurement where contracting authorities act as a launch customer for innovative goods or services which are not yet available on a large-scale commercial basis, and may include conformity testing.
- (8) “access rights” means rights to use results or background **under terms and conditions laid down in accordance with this Regulation**;
- (9) “background” means any data, know-how or information whatever its form or nature, tangible or intangible, including any rights such as intellectual property rights, that is: (i) held by beneficiaries prior to their accession to the action; **and** (ii) identified by the beneficiaries in **a written agreement** as needed for implementing the action or for exploiting its results;
- (10) “dissemination” means the public disclosure of the results by appropriate means (other than resulting from protecting or exploiting the results), including by scientific publications in any medium;
- (11) “exploitation” means the use of results in further research and innovation activities other than those covered by the action concerned, or **inter alia, commercial exploitation such as** developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, or in standardisation activities;

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<sup>[2]</sup> Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006.

- (12) “fair and reasonable conditions” means appropriate conditions, including possible financial terms or royalty-free conditions, taking into account the specific circumstances of the request for access, for example the actual or potential value of the results or background to which access is requested and/or the scope, duration or other characteristics of the exploitation envisaged;
- (13) “funding body” means a body or organisation, other than the Commission, as referred to in point (c) of Article 62(1) of the Financial Regulation, to which the Commission has entrusted budget implementation tasks under the Programme;
- (14) “international European research organisation” means an international organisation, the majority of whose members are Member States or associated countries, and whose principal objective is to promote scientific and technological cooperation in Europe;
- (15) 'legal entity' means any natural or legal person created and recognised as such under national law, Union law or international law, which has legal personality and which may, acting in its own name, exercise rights and be subject to obligations, or an entity without a legal personality in accordance with Article 197(2)(c) of the Financial Regulation;
- (15 a) ***“Widening countries” means those countries identified through the composite indicator of Research Excellence (R&D intensity, excellence in S&T, Knowledge-intensity of economy, High Tech& Medium Tech product contribution to trade balance) and with a corrective threshold of 70% of the Union average<sup>10</sup>***
- (16) “non-profit legal entity” means a legal entity which by its legal form is non-profit-making or which has a legal or statutory obligation not to distribute profits to its shareholders or individual members;
- (17) “mid-cap” means a company that is not a micro-, small- and medium-sized enterprise (‘SME’) as defined in Commission Recommendation 2003/361/EC<sup>11</sup>, and that has a number of employees of up to 3000 where the staff headcount is calculated in accordance with Articles 3, 4, 5 and 6 of Title I of the Annex of that Recommendation;
- (18) “results” means any tangible or intangible ***output*** of the action, such as data, know-how or information, whatever its form or nature, whether or not it can be protected, as well as any rights attached to it, including intellectual property rights;
- (19) “seal of excellence” means a certified label which shows that a proposal submitted to a call for proposals exceeded all of the thresholds set out in the work programme, but could not be funded due to lack of budget available to that call in the work programme, ***but which might receive support from other EU or national sources of funding;***
- (19 a) ***‘strategic R&I Plan’ means a document adopted by means of a delegated act every two years supplementing the Specific Programme, and following a broad mandatory multi-stakeholder consultation process with Member States, the European Parliament, the RDI stakeholders, including civil society. It defines the priorities, the instruments, and the suitable types of action and forms of implementation, thus serving as a basis for the development of the work programmes. It contains in particular the selected missions, the newly established or continued contractual or institutional partnerships, FET-Flagships and KICs;***

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<sup>10</sup>The Commission may review and if necessary update the list of widening countries in its work programmes.

<sup>11</sup>

(20) "work programme" means the document adopted by the Commission for the implementation of the specific programme<sup>12</sup> in accordance with its Article 12 or the equivalent document in content and structure adopted by a funding body;

(21) "reimbursable advance" means the part of a Horizon Europe **Programme** blended finance corresponding to a loan under Title X of the Financial Regulation, but that is directly awarded by the Union on a non-profit basis to cover the costs of activities corresponding to an innovation action, and to be reimbursed by the beneficiary to the Union under the conditions provided for in the contract;

(22) "contract" means the agreement concluded between the Commission or a funding body with a legal entity implementing an innovation and market deployment action and supported by a Horizon Europe **Programme**-blended finance.

(23) "classified information" means EU classified information as defined in Article 3 of Commission Decision (EU, Euratom) 2015/444 as well as classified information of Member States, classified information of third countries with which the Union has a security agreement and classified information of international organisation with which the Union has a security agreement;

(24) 'Blending operation' means actions supported by the EU budget, including within blending facilities pursuant to Article 2(6) of the Financial Regulation, combining non-repayable forms of support and/or financial instruments from the EU budget with repayable forms of support from development or other public finance institutions, as well as from commercial finance institutions and investors;

(25) "Horizon Europe **Programme** blended finance" means a single financial support to an innovation and market deployment action, consisting in a specific combination of a grant or a reimbursable advance with an investment in equity;

*(25 a) 'research and innovation action' means an action primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution. This may include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment;*

*(25 b) 'innovation action' means an action primarily consisting of activities directly aimed at producing plans and arrangements or designs for new, altered or improved products, processes or services, possibly including prototyping, testing, demonstrating, piloting, large-scale product validation and market replication;*

*(25 c) 'ERC frontier research' means principal investigator-led research actions, hosted by ERC only single or multiple beneficiaries;*

*(25 d) 'training and mobility action' means an action geared towards the improvement of skills, knowledge and career prospects of researchers based on mobility between countries, and, if relevant, between sectors or disciplines;*

*(25 e) 'programme co-funding action' means an action to provide co-funding to a programme of activities established and/or implemented by entities managing and/or funding research and innovation programmes, other than Union funding bodies;*

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(25 f) *‘pre-commercial procurement action’ means an action with the primary aim of conducting pre-commercial procurement procedures implemented by beneficiaries that are contracting authorities or contracting entities;*

(25 g) *‘public procurement of innovative solutions action’ means an action with the primary aim of conducting joint or coordinated public procurement procedures concerning innovative solutions implemented by beneficiaries that are contracting authorities or contracting entities;*

(25 h) *‘coordination and support action’ means an action contributing to the objectives of the Programme, excluding research and innovation activities;*

(25 i) *‘public procurement’ means the implementation of parts of the Programme related to strategic interests and autonomy of the Union and the carrying out, for the Commission’s own purposes, of public procurement procedures for studies, products, services and capabilities;*

(25 j) *‘affiliated entity’ means any legal entity that is under the direct or indirect control of a participant, or under the same direct or indirect control as the participant, or that is directly or indirectly controlling a participant;*

### CA 3

#### Article 3

#### **Programme Objectives**

1. The Programme’s general objective is to deliver scientific, **technological**, economic and societal impact from the Union’s investments in research and innovation so as to strengthen the scientific and technological bases of the Union **as a whole, to strengthen the European Research Area** and foster its competitiveness. **Research and industry shall** deliver on the Union strategic priorities **and policies**, contribute to **addressing** global challenges, **including** the Sustainable Development Goals **and the Paris Agreement as well as contribute to achieving an overall investment 3% of the GDP of the Union invested in research and development, in line with the commitment made by the Union Heads of States and governments.**

2. The Programme has the following specific objectives:

**(- a) new to develop, promote and spread scientific and technological excellence;**

(a) to support the creation and diffusion of high-quality knowledge, skills, technologies and solutions, **based on both fundamental and applied research, in order to tackle** global challenges, **including climate change and Sustainable Development goals;**

**(aa) to aim at significantly reducing the R&I divide within the Union, in particular by increasing participation in Horizon Europe of low R&I performing Member States as compared to the previous FP;**

(b) to strengthen **the EU added value of RDI funding**, the impact of research and innovation in developing, supporting and implementing Union policies, and support the **access to and** uptake of innovative solutions in **society and European** industry;

(c) to foster all forms of innovation and strengthen market deployment **and exploitation** of **RDI results especially within the Union;**

(d) to optimise the Programme's delivery for ***strengthening and increasing the impact and RDI attractiveness of the*** European Research Area.

## CA 4

### *Article 4* ***Programme structure***

1. The Programme is structured in the following parts contributing to the general and specific objectives set out in Article 3:

(1) Pillar I '***Excellent and*** Open Science' with the following components:

- (a) the European Research Council (ERC);
- (b) Marie Skłodowska-Curie Actions (MSCA);
- (c) research infrastructures.

(2) Pillar II 'Global Challenges and ***European*** Industrial Competitiveness' with the following components:

- (a) cluster 'Health';
- (b) cluster 'Inclusive and ***Creative*** Society';
- (b a) cluster 'Secure Societies';***
- (c) cluster 'Digital, Industry ***and Space***';
- (d) cluster 'Climate, Energy and Mobility';
- (e) cluster 'Food, Natural Resources and ***Agriculture***';
- (f) non-nuclear direct actions of the Joint Research Centre (JRC).

(3) Pillar III '***Innovative Europe***'-with the following components:

- (a) the European Innovation Council (EIC);
- (b) European innovation ecosystems;
- (c) the European Institute of Innovation and Technology (EIT).

(4) Part 'Strengthening the European Research Area' with the following components:

- (a) ***Spreading*** excellence ***and widening participation across the Union;***
- (b) reforming and enhancing the European R&I System.

2. The broad lines of activities are set out in Annex I.

## CA 5

### *Article 5* ***Defence research***

1. Activities to be carried out under the specific programme referred to in Article 1(3)(b) and which are laid down in Regulation .... establishing the European Defence Fund, shall ~~exclusivly~~ be focused on defence ***research and*** applications, with the objective to

foster **consolidation**, competitiveness, efficiency and innovation of *the Union's* defence industry **and avoid duplications between the two programmes**.

2. This Regulation does not apply to the specific programme referred to in Article 1(3)(b), with the exception of this Article, Article 1(1) and (3) and Article 9(1).

## CA 6

### Article 6

#### **Strategic planning and implementation and forms of EU funding**

1. The Programme shall be implemented in direct management in accordance with the Financial Regulation or in indirect management with funding bodies referred to in Article 62(1)(c) of the Financial Regulation.
2. The Programme may provide funding to indirect actions in any of the forms laid down in the Financial Regulation, in particular grants (including operating grants) **which shall be the main form of support under the Programme**, prizes and procurements. It may also provide financing in the form of financial instruments within blending operations.
3. The rules for participation and dissemination laid down in this Regulation shall apply to indirect actions.
4. The main types of action to be used under the Programme are set out and defined **in Article 2 and** in Annex II. **The** forms of funding, **referred to in paragraph 2**, shall be used in a flexible manner across all objectives of the Programme with their use being determined on the basis of the needs and the characteristics of the particular objectives.
5. The Programme shall also support direct actions undertaken by the JRC. Where these actions contribute to initiatives established under Article 185 or Article 187 TFEU, this contribution shall not be considered as part of the financial contribution allocated to those initiatives.
6. The implementation of the specific programme<sup>13</sup> shall be based **on Strategic R&I Plans and in accordance with all the objectives of the Programme as set out in Article 3 and following a process of** transparent, **inclusive** and strategic multiannual planning of research and innovation activities, in particular for the pillar 'Global Challenges and **European** Industrial Competitiveness'.

Consultations with **national authorities, the European Parliament, RDI and industry stakeholders including European Technology Platforms (ETPs), civil society representatives, and independent advisory groups of high-level experts shall be held** about priorities and the suitable types of action and forms of implementation to use. **The Strategic Planning** shall ensure alignment with other relevant Union programmes **and increase complementarity and synergies with national and regional RDI funding programmes and priorities, thereby strengthening the ERA.**

**6 a. The Programme shall provide for all beneficiaries the possibility to apply for funding in a faster manner. A number of research and innovation actions shall apply a Fast Track to Research and Innovation logic where time-to-grant shall not exceeding 6 months. This shall allow a faster, bottom-up access to funds for small collaborative consortia covering actions from fundamental research to market application. Calls under the Fast Track to Research and Innovation approach shall be continuously open with cut-off dates and be implemented in the work programmes under clusters, the EIC and the "spreading excellence" part.**

7. Horizon Europe activities shall be delivered through calls for proposals, some of which organised as parts of missions and European Partnerships, *except for the activities referred to in Article 39 on Prizes*.

## CA 6a

### *Article 6 a new*

#### *Principles of EU funding and cross-cutting issues*

1. Research and innovation activities carried out under Horizon Europe shall have an *exclusive* focus on civil applications. *Budgetary transfers between this Programme and the European Defence Fund shall not be permitted.*

2. *Horizon Europe shall ensure a multidisciplinary approach and shall foresee, where appropriate, the integration of social sciences and humanities across all activities developed under the Programme.*

3. *The collaborative parts of the Programme shall ensure a balance between lower and higher TRLs thereby covering the whole value chain.*

4. *The Programme shall aim to significantly reduce the RDI divide within the Union and to promote broad geographical coverage in collaborative projects. Those efforts shall be mirrored by proportional measures by Member States, with the support of EU, national and regional funds. Particular attention shall be paid to geographical balance, subject to the situation in the field of research and innovation concerned, in funded projects, evaluation panels and in bodies such as boards and expert groups without undermining the excellence criteria.*

5. The Programme shall ensure the effective promotion of gender equality and the gender dimension in research and innovation content *and shall address the causes of gender imbalance*. Particular attention shall be paid to ensuring gender balance, subject to the situation in the field of research and innovation concerned, in evaluation panels *and in other relevant advisory* bodies such as boards and expert groups.

6. *The Programme shall aim at continuous administrative simplification and reduction of the burden for the beneficiaries.*

7. *Climate mainstreaming shall be adequately integrated in research and innovation content and applied at all stages of the research cycle.*

8. *The programme shall provide, where applicable, for societal engagement to better align the process of R&I and its outcomes with the values and needs of society, by promoting science engagement and science education activities and by co-creation and co-design of scientific agendas through engagement of citizens and civil society in R&I priority-setting;*

9. *The programme shall ensure transparency and accountability of public funding in research and innovation projects, thereby preserving the public interest.*

10. *The Commission or the relevant funding body shall ensure that sufficient guidance and information is made available to all potential participants at the time of publication of the call for proposals, in particular the applicable model grant agreement.*

## Article 7

**Missions**

1. Missions shall be programmed within the pillar ‘Global Challenges and *European* Industrial Competitiveness’, but may also benefit from actions carried out within other parts of the Programme *as well as actions carried out under other Union funding programmes, under Horizon Europe rules.*

2. *The content of the missions, objectives, targets, timelines and their implementation shall be further specified in the Strategic R&I Plans, as defined in Article 2 and specified in Article 6 of the Framework programme and in Article 5 of the Specific Programme. Evaluation shall be carried out in accordance with Article 26.*

*2 a. During the first two years of the programme, a maximum of 10% of the annual budget of Pillar II shall be programmed through specific calls for implementing the missions. For the last three years of the programme, and only after a positive evaluation of the mission selection and management process, this percentage may be increased. The total budgetary share dedicated to missions shall be specified in Strategic R&I Plans.*

*2 b. A full evaluation of the missions covering the scope, governance, Board appointment and its preliminary actions shall be carried out in accordance with their respective measurable milestones. The recommendations resulting from this evaluation shall be taken into account before programming new missions or before continuing, terminating or redirecting existing ones.*

3. Missions shall:

(a) have a clear EU-added value and contribute to reaching Union priorities, *objectives and commitments;*

*(aa) be inclusive, encourage broad engagement and ensure participation of various types of stakeholders and deliver R&D&I results from which all Member States shall benefit;*

(b) be bold, inspirational, and have wide societal, *scientific, technological, diplomatic, environmental or* economic relevance;

(c) indicate a clear direction and be targeted, measurable and time-bound;

(d) *be selected in a transparent manner and* be centered on ambitious, *excellence-driven*, but realistic research and innovation activities *across all stages of development;*

*(da) include an element of urgency regarding the mission objectives, have the necessary scope, scale and wide mobilization of the resources required and with the sole focus being to deliver the mission outcome;*

(e) spark activity across disciplines (*including social sciences and humanities*), sectors and actors;

(f) be open to multiple, bottom-up solutions;

(fa) *achieve synergies in a transparent manner with other EU programmes as well as public and private funds, including through active involvement of national and regional innovation ecosystems.*

## CA 7a

### Article 7 a

#### *The European Innovation Council*

- 1. The Commission shall establish a European Innovation Council (EIC) for implementing actions under Pillar III 'Innovative Europe' which relates 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 be open to all types of innovators from individuals to universities, research organisations and companies, startups, in particular SMEs and mid-caps and from single beneficiaries to multi-disciplinary consortia. At least 70% of EIC budget shall be dedicated to innovative start-ups and SMEs.*
- 3. The EIC Board and management features of the EIC are defined in Decision (EU)... [Specific Programme] and its annexes.*

## CA 8

### Article 8

#### **European Partnerships**

1. Parts of Horizon Europe may be implemented through European Partnerships. The involvement of the Union in European Partnerships may take any of the following forms:
  - (a) participation in partnerships set up on the basis of memoranda of understanding and/or contractual arrangements between the Commission and the partners referred to in Article 2(3), specifying the objectives of the partnership, related commitments for financial and/or in-kind contributions of the partners, key performance and impact indicators, and outputs to be delivered. They include the identification of complementary research and innovation activities that are implemented by the partners and by the Programme (Co-programmed European Partnerships);
  - (b) participation in and financial contribution to a programme of research and innovation activities, based on the commitment of the partners for financial and in-kind contributions and integration of their relevant activities using a Programme co-fund action (Co-funded European Partnerships);
  - (c) participation in and financial **and/or in-kind** contributions to research and innovation programmes undertaken by several Member States in accordance with Article 185 TFEU, or by bodies established pursuant to Article 187 TFEU, such as Joint Undertakings, or by the EIT Knowledge and Innovation Communities in compliance with the [EIT Regulation] (Institutionalised European Partnerships), to be implemented only where other forms of European Partnerships would not achieve the objectives or would not generate the necessary expected impacts, and if justified by a long-term perspective and high degree of integration including central management of all financial contributions.
2. European Partnerships shall:
  - (a) be established **only** in cases where they will more effectively achieve objectives of Horizon Europe **when compared to other parts of the Framework programme**;

- (b) adhere to the principles of Union added value, transparency, openness, impact, **strong** leverage effect, long-term financial **and/or in-kind** commitment **or in-kind** of all the involved parties, flexibility, coherence, and complementarity with Union, local, regional national and international initiatives;
- (c) be time limited and include conditions for phasing-out the Programme funding.

**2 a. All Partnerships shall be identified in Strategic R&I Plans, as referred to in Article 6 and Annex III of the Framework Programme and Annex I of the Specific Programme, before being implemented in work programmes or work plans.**

Provisions and criteria for their selection, implementation, monitoring, evaluation and phasing-out are set out in Annex III.

## CA 9

### Article 9

#### Budget

1. The financial envelope for the implementation of the Framework Programme for the period 2021 – 2027 shall be EUR **120 000 000 000 in 2018** prices for the specific programme referred to in Article 1(3)(a) and, in addition, the amount for the specific programme referred to in Article 1(3)(b), as laid down in Regulation.... establishing the European Defence Fund.
2. The indicative distribution of the amount referred to in paragraph 1, first half sentence, shall be:
  - (a) **27.42 %** for Pillar I '**Excellent and** Open Science' Open Science' for the period 2021-2027, of which
    - (1) **17.64%** for the European Research Council;
    - (2) **7.23%** for Marie Skłodowska-Curie Actions;
    - (3) **2.55%** for research infrastructures;
  - (b) **55.48%** for Pillar II 'Global Challenges and **European** Industrial Competitiveness' for the period 2021-2027, of which
    - 1) **8.16%** for cluster 'Health';
    - 2) **2.50%** for cluster 'Inclusive and **Creative** Society';
    - 2a) **2.00% for cluster 'Secure Societies';**
    - 3) **15.94%** for cluster 'Digital, Industry **and Space**';
    - 4) **15.84%** for cluster 'Climate, Energy and Mobility';
    - 5) **9.00%** for cluster 'Food, Natural Resources and **Agriculture**';
    - 6) **2.04%** for non-nuclear direct actions of the Joint Research Centre (JRC).
  - (c) **12.71%** for Pillar III '**Innovative Europe**'-for the period 2021-2027, of which:
    - 1) **8.71%** for the European Innovation Council (EIC) including up to **0.53%** for European innovation ecosystems;

2) **4%** for the European Institute of Innovation and Technology (EIT).

(d) **4.39%** for the Part 'Strengthening the European Research Area' with the following components:

1) **4.00%** for *Spreading excellence and widening participation across the Union*;

2) **0.39%** for reforming and enhancing the European R&I System.

3. In order to respond to unforeseen situations or to new developments and needs, the Commission may, within the annual budgetary procedure, deviate from the amounts referred to in paragraph 2 up to a maximum of 10 %, *including the allocation of the contributions from associated countries*.

**3 a. As part of the general EU objective of mainstreaming climate actions and of spending 30% of the EU budget in support of climate objectives, actions under the Programme shall contribute at least 35% of the expenditure of the Programme to climate objectives where appropriate.**

**3 b. At least € 2.5 billion shall be dedicated to grants for incremental innovation in SMEs according to the instrument described in article 43.a. of this Regulation and in Annex I of the Decision.**

**3 c. 45% of the Inclusive and Creative Society cluster's budget will support research on cultural and creative sectors, including EU's cultural heritage, this will include € 300 million to be earmarked for the creation of a European Cultural Heritage Cloud, as detailed in the Annex I of the Specific Programme following an impact assessment to be presented to the EP.**

**3 d. At least € 1 billion shall aim to be dedicated to Quantum Research under the Digital, Industry and Space cluster of Pillar II.**

4. The amount referred to in paragraph 1, first half sentence may also cover expenses for preparation, monitoring, control, audit, evaluation and other activities and expenditures necessary for managing and implementing the Programme, including all administrative expenditure, as well as evaluating the achievement of its objectives. **Those expenses shall not exceed 5% of the total amount of the Programme.** It may moreover cover expenses relating to the studies, meetings of experts, information and communication actions, in so far as they are related to the objectives of the Programme, as well as expenses linked to information technology networks focusing on information processing and exchange, including corporate information technology tools and other technical and administrative assistance needed in connection with the management of the Programme.

5. If necessary, appropriations may be entered in the budget beyond 2027 to cover the expenses provided for in paragraph 4, to enable the management of actions not completed by 31 December 2027.

6. Budgetary commitments for actions extending over more than one financial year may be broken down over several years into annual instalments.

7. Without prejudice to the Financial Regulation, expenditure for actions resulting from projects included in the first work programme may be eligible as from 1 January 2021.

~~8. Resources allocated to Member States under shared management and transferrable in accordance with Article 21 of Regulation (EU) XX [...Common Provisions Regulation] may, at~~

~~their request, be transferred to the Programme. The Commission shall implement those resources directly in accordance with point (a) of Article 62(1) of the Financial Regulation or indirectly in accordance with point (c) of that Article. Where possible, those resources shall be used for the benefit of the Member State concerned.~~

~~9. Horizon Europe is designed to be implemented in synergy with other Union funding programmes. A non-exhaustive list of synergies with other Union funding programmes is included in Annex IV.~~

## CA 10

### Article 10

#### Open access and open data

1. Open access to scientific publications resulting from research funded under the Programme shall be ensured in accordance with Article 35(3). Open access to research data shall be ensured in line with the principle 'as open as possible, as closed as necessary'.

*1 a. Open access to research data shall recognise the need for different access regimes because of the Union's economic interest, Intellectual Property Rights, personal data protection and confidentiality, security concerns and other legitimate interests, including the possibility for opt-out. Data management plans during the duration of the project shall be considered as eligible costs.*

*1 b. Reciprocal open access to scientific publications and research data shall be promoted internationally, taking into account EU's competitiveness and industrial interests. In particular, reciprocal open access shall be encouraged in all association agreements and in S&T cooperation agreements with third countries, including agreements signed by funding bodies entrusted for indirect management of the Programme.*

2. Responsible management of research data shall be ensured in line with the principles of *data* 'Findability', 'Accessibility', 'Interoperability' and 'Reusability' (FAIR).

3. Open science practices beyond open access to research *data and scientific publications* and responsible management of research data shall be *promoted*.

## CA 11

### Article 11

#### Complementary, combined and cumulative funding

*1. Horizon Europe shall be implemented in synergy with other Union funding programmes while seeking maximal administrative simplification. A non-exhaustive list of synergies with other funding programmes is included in Annex IV. The Horizon Europe single set of rules shall apply for an RDI co-funded action.*

*2. The Seal of Excellence shall be awarded for all parts of the Programme.* Actions awarded a Seal of Excellence certification, or which comply with the following cumulative, comparative, conditions:

- (a) they have been assessed in a call for proposals under the Programme;
- (b) they comply with the minimum quality requirements of that call for proposals;
- (c) they may not be financed under that call for proposals due to budgetary constraints,

may receive support *from national or regional funds, including* from the European Regional Development Fund, the Cohesion Fund, the European Social Fund+ or the European Agricultural Fund for Rural Development, in accordance with paragraph 5 of Article [67] of Regulation (EU) XX [Common Provisions Regulation] and Article [8] or Regulation (EU) XX [Financing, management and monitoring of the Common Agricultural Policy], *without requiring any further application and evaluation and* provided that such actions are consistent with the

objectives of the programme concerned. *With the exception of state aid rules*, the rules of the Fund providing support shall apply.

3. In accordance with Article 21 of Regulation (EU) XX [... Common Provisions Regulation], *the managing authority, on a voluntary basis, may request the transfer of parts of its financial allocations to Horizon Europe. Transferred resources shall be implemented in accordance with the rules of Horizon Europe. In addition, the Commission shall ensure that such transferred funds are earmarked entirely for programmes and/or projects which will be implemented in the Member State or region, as applicable, they originated from.*

4. *With prior authorisation from the applicants, the Commission shall include the allocations referred to in this Article in the information system on selected projects in order to allow for a fast exchange of information and enable financing authorities to provide funding to the selected actions.*

*An action that has received a contribution from another Union programme may also receive a contribution under the Programme, provided that the contributions do not cover the same costs.*

## CA 12

### Article 12

#### *Third countries associated to the Programme*

1. The Programme shall be open to association of the following third countries:
  - (a) European Free Trade Association (EFTA) members which are members of the European Economic Area (EEA), in accordance with the conditions laid down in the EEA agreement;
  - (b) acceding countries, candidate countries and potential candidates, in accordance with the general principles and general terms and conditions for the participation of those countries in Union programmes established in the respective framework agreements and Association Council decisions, or similar agreements, and in accordance with the specific conditions laid down in agreements between the Union and those countries;
  - (c) countries covered by the European Neighbourhood Policy, in accordance with the general principles and general terms and conditions for the participation of those countries in Union programmes established in the respective framework agreements and Association Council decisions, or similar agreements, and in accordance with the specific conditions laid down in agreements between the Union and those countries;
  - (d) third countries and territories that fulfil all of the following criteria:
    - i. a good capacity in science, technology and innovation;
    - ii. commitment to a rules-based open market economy, including fair and equitable dealing with intellectual property rights, *respect of human rights*, backed by democratic institutions;
    - iii. active promotion of policies to improve the economic and social well-being of citizens.

**Full or partial** association to the Programme of each of the third countries under point (d) shall be **based on an assessment of the benefits for the EU. It shall in particular be** in accordance with the conditions laid down in a specific agreement covering the participation of the third country to any Union programme, provided that the agreement:

- ensures a fair balance as regards the contributions and benefits of the third country participating in the Union programmes-

- **confers the right to coordinate an action of the Programme provided that it benefits the Union and that the protection of EU's financial interest is ensured;**

- lays down the conditions of participation in the **Programme** including the calculation of financial contributions to individual (**sub-**) programmes and their administrative costs. These contributions shall constitute assigned revenues in accordance with Article 21(5) of the Financial Regulation;

- guarantees the rights of the Union to ensure sound financial management and to protect **EU** financial interests.

2. The scope of association of each third country to the Programme shall take into account the objective of driving economic growth in the Union through innovation **and avoid the brain drain outside the Union**. Accordingly, with the exception of EEA members, acceding countries, candidate countries and potential candidates, **mono-beneficiary** parts of the Programme may be excluded from an association agreement for a specific country, **in particular those dedicated to private entities**.

3. The association agreement shall, where appropriate, **provide for and pursue reciprocal** participation of legal entities established in the Union in equivalent programmes of associated countries in accordance with the conditions laid down therein.

4. The **association agreement** conditions determining the level of financial contribution shall ensure an automatic correction, **every two years** of any imbalance compared to the amount that entities established in the associated country receive through participation in the Programme, taking into account the costs in the management, execution and operation of the Programme.

**4a. The contributions of all associated countries shall be included in the relevant parts of the Programme provided that the budget breakdown as specified in Article 9, paragraph 2 is respected. The Commission shall report to the Council and the Parliament during the annual budgetary procedure the total budget of each part of the Programme, identifying each of the associated countries, individual contributions and their financial balance.**

## CA 13

### Article 13

#### Funding bodies and direct actions of JRC

1. Funding bodies may depart from the rules set out in this Title only if this is provided for in the basic act setting up the funding body or entrusting budget implementation tasks to it or, for funding bodies under Article 62(1)(c)(ii), (iii), or (v) of the Financial Regulation, if it is provided for in the contribution agreement and their specific operating needs or the nature of the action so require.

2. The rules set out in this Title shall not apply to direct actions undertaken by the JRC.

## CA 14

### *Article 14*

#### **Eligible actions and ethical principles**

1. Without prejudice to paragraphs 2 and 3 of this Article, only actions implementing the objectives referred to in Article 3 shall be eligible for funding.

The following fields of research shall not be financed:

- (a) activities aiming at human cloning for reproductive purposes;
  - (b) activities intended to modify the genetic heritage of human beings which could make such changes heritable<sup>14</sup>;
  - (c) activities intended to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer;
2. Research on human stem cells, both adult and embryonic, may be financed, depending both on the contents of the scientific proposal and the legal framework of the Member States involved. No funding shall be granted for research activities that are prohibited in all the Member States. No activity shall be funded in a Member State where such activity is forbidden.
3. The fields of research set out in paragraph 1 may be reviewed within the context of the interim evaluation referred to in Article 47(2) in the light of scientific advances.

## CA 15

### *Article 15*

#### **Ethics**

1. Actions carried out under the Programme shall comply with ethical principles and relevant national, Union and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols.

Particular attention shall be paid to the principle of proportionality, the right to privacy, the right to the protection of personal data, the right to the physical and mental integrity of a person, the right to non-discrimination and the need to ensure high levels of human health protection.

2. Entities participating in the action shall provide:

- (b) an ethics self-assessment identifying and detailing all the foreseeable ethics issues related to the objective, implementation and likely impact of the activities to be funded, including a confirmation of compliance with paragraph 1, and a description of how it will be ensured;
- (c) a confirmation that the activities will comply with the European Code of Conduct for Research Integrity published by All European Academies and that no activities excluded from funding will be conducted;
- (d) for activities carried out outside the Union, a confirmation that the same activities would have been allowed in a Member State; and
- (e) for activities making use of human embryonic stem cells, as appropriate, details of licensing and control measures that shall be taken by the competent authorities of the Member States concerned as well as details of the ethics approvals that shall be obtained before the activities concerned start.

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<sup>14</sup> Research relating to cancer treatment of the gonads can be financed

3. Proposals shall be systematically screened to identify those actions raising complex or serious ethics issues and submit them to an ethics assessment. The ethics assessment shall be carried out by the Commission unless it is delegated to the funding body. For actions involving the use of human embryonic stem cells or human embryos, an ethics assessment shall be mandatory. Ethics screenings and assessments shall be carried out with the support of ethics experts. The Commission and the funding bodies shall ensure the transparency of the ethics procedures.

4. Entities participating in the action shall obtain all approvals or other mandatory documents from the relevant national, local ethics committees or other bodies such as data protection authorities before the start of the relevant activities. Those documents shall be kept on file and provided to the Commission or funding body upon request.

5. If appropriate, ethics checks shall be carried out by the Commission or funding body. For serious or complex ethics issues, the checks shall be carried out by the Commission unless it is delegated to the funding body.

Ethics checks shall be carried out with the support of ethics experts.

6. Actions which are not ethically acceptable *shall* be rejected or terminated *as soon as the ethical unacceptability has been established*.

## CA 16

### Article 16

#### Security

1. Actions carried out under the Programme shall comply with the applicable security rules and in particular rules on protection of classified information against unauthorised disclosure, including compliance with any relevant national and Union law. In case of research carried out outside the Union using and/or generating classified information, it is necessary that, in addition to the compliance with those requirements, a security agreement shall have to be concluded between the Union and the third country in which the research is conducted.
2. Where appropriate, proposals shall include a security self-assessment identifying any security issues and detailing how these issues will be addressed in order to meet the relevant national and Union law.
3. Where appropriate, the Commission or funding body shall carry out a security scrutiny for proposals raising security issues.
4. Where appropriate, the actions shall comply with Decision (EU, Euratom) 2015/444, and its implementing rules.
5. Entities participating in the action shall ensure the protection against unauthorised disclosure of classified information used and/or generated by the action. They shall provide proof of personal and/or facility security clearance from the relevant national security authorities, prior to the start of the activities concerned *on demand of the Commission or funding body*.
6. If external experts have to deal with classified information, the appropriate security clearance shall be required before those experts are appointed.
7. Where appropriate, the Commission or funding body may carry out security checks.
8. Actions which do not comply with security rules may be rejected or terminated at any time.

## CHAPTER II

### Grants

## CA 17

### Article 17

#### Grants

Grants under the Programme shall be awarded and managed in accordance with Title VIII of the Financial Regulation, unless otherwise specified in this Chapter.

## CA 18

### Article 18

#### *Entities eligible for participation*

1. Any legal entity, regardless of its place of establishment, ***including legal entities from non-associated third countries*** or international organisation may participate in actions under the Programme, provided that the conditions laid down in this Regulation have been met together with any conditions laid down in the work programme or call.
2. Entities shall be part of a consortium that shall include at least three independent legal entities each established in a different Member State ***including outermost regions*** or ***in an associated*** country and with at least ***two*** of them established in a Member State, unless ***the action is one referred to in paragraphs 3 or 4;***
3. European Research Council (ERC) frontier research actions, European Innovation Council (EIC) actions, training and mobility actions or programme co-fund actions may be implemented by one or more legal entities, one of which must be established in a Member State or ***where applicable*** associated country ***as referred to in Article 12(1).***
4. Coordination and support actions may be implemented by one or more legal entities, which may be established in a Member State ***or*** associated country or in another third country.
5. For actions related to Union strategic assets, interests, autonomy or security, the work programme may provide that the participation can be limited to those legal entities established in Member States only, or to those legal entities established in specified associated or other third countries in addition to Member States.
6. The work programme may provide for eligibility criteria in addition to those set out in paragraphs 2, 3, 4, and 5 according to specific policy requirements or to the nature and objectives of the action, including the number of legal entities, the type of legal entity and the place of establishment.
7. For actions benefiting from amounts under Article ***II***, the participation shall be limited to a single legal entity established in the jurisdiction of the delegating Managing Authority, except if otherwise agreed with the Managing Authority and provided for in the work programme.
8. Where indicated in the work programme, the Joint Research Centre may participate in actions.
9. For European Research Council (ERC) frontier research actions and training and mobility actions, international organisations with headquarters in a Member State or associated country shall be deemed to be established in this Member State or associated country.

## CA 19

### Article 19

#### Entities eligible for funding

1. Entities are eligible for funding if they are established in a Member State or associated country ***as referred to in Article 12 (1).***

For actions benefiting from amounts under Article **11(3)**, only entities established in the jurisdiction of the delegating Managing Authority shall be eligible for funding out of these amounts.

***1 a. Where applicable, international organisations shall be eligible for funding in an action if their headquarters are located in a Member State or in an associated country.***

***1 b. new Low to middle income countries and exceptionally for other non-associated third countries they could be eligible for funding in an action if:***

(a) the third country is identified in the work programme ***and***;

(b) the Commission or funding body consider that its participation is essential for implementing the action;

2. Entities established in other a non-associated third country should bear the cost of their participation. ***R&D agreements between these non-associated third countries and the EU can be made*** wherever deemed useful, ***and*** co-funding mechanism similar to the ones agreed inside Horizon 2020 may be established. These ***countries shall ensure reciprocal access for Union legal entities to those countries' RDI funding programmes, as well as reciprocity in open access to scientific results and data and to fair and equitable terms for intellectual property rights.***

3. Affiliated entities are eligible for funding in an action if they are established in a Member State ***or*** Associated country.

***3 a. The Commission shall report to the Parliament and to the Council specifying, for each non-associated third country the amount of the Union's financial contributions provided to the participating entities and the amount of the financial contributions provided by the same country to Union entities participating in their activities.***

## CA 20

### Article 20 Calls for proposals

1. For all actions, the content of the calls for proposals shall be included in the work programme.

***The work programme shall explain why a particular action is to be funded with reference to the outcome of specific previous projects and to the state of science, technology and, innovation at national, Union and international level and of relevant policy, market and societal developments.***

~~2. For EIC Pathfinder transition activities:~~

~~(f) the launch and the content of the calls for proposals shall be determined with regard to objectives and budget established by the work programme in relation with the concerned portfolio of actions;~~

~~(g) grants for a fixed amount not exceeding EUR 50,000 may be awarded without a call for proposals to carry out urgent coordination and support actions for reinforcing the portfolio's community of beneficiaries or assessing possible spin-offs or potential market creating innovation.~~

3. If necessary to achieve their objectives, calls may be restricted to develop additional activities or to add additional partners to existing actions.

4. A call for proposals is not required for coordination and support actions or programme co-fund actions which:
    - (a) are to be carried out by the Joint Research Centre or legal entities identified in the work programme and
    - (b) do not fall within the scope of a call for proposals.
  5. The work programme shall specify calls for which "Seals of Excellence" will be awarded. With prior authorisation from the applicant, information concerning the application and the evaluation may be shared with interested financing authorities, subject to the conclusion of confidentiality agreements.
- 5 a. To tackle oversubscription, Commission can apply, to a number of calls, two-stage evaluation procedure.**

## CA 21

### Article 21

#### Joint calls

The Commission or funding body may issue a joint call for proposals with:

- (a) third countries, including their scientific and technological organisations or agencies;
- (b) international organisations;
- (c) non-profit legal entities.

In the case of a joint call, ***applying consortia shall fulfil the requirements provided in Art. 18 of this Regulation and*** joint procedures shall be established for selection and evaluation of proposals. The procedures shall involve a balanced group of experts appointed by each party.

## CA 22

### Article 22

#### Pre-commercial procurement and procurement of innovative solutions

1. Actions may involve or have as their primary aim pre-commercial procurement or public procurement of innovative solutions that shall be carried out by beneficiaries which are contracting authorities or contracting entities as defined in Directives 2014/24/EU<sup>15</sup>, 2014/25/EU<sup>16</sup> and 2009/81/EC<sup>17</sup>.

2. The procurement procedures:

- (a) shall comply with the principles of transparency, non-discrimination, equal treatment, sound financial management, proportionality and competition rules;
- (b) for pre-commercial procurement, ***a simplified and/or accelerated procedure may be used, and*** may provide for specific conditions such as the place of performance of the procured activities being limited to the territory of the Member States and of associated countries;

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<sup>15</sup> Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC. (OJ L 94, 28.03.2014, p. 65).

<sup>16</sup> Directive 2014/25/EU of the European Parliament and of the Council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC (OJ L 94, 28.03.2014, p. 243).

<sup>17</sup> Directive 2009/81/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security, and amending Directives 2004/17/EC and 2004/18/EC (OJ L 216, 20.08.2009, p.76).

- (c) may authorise the award of multiple contracts within the same procedure (multiple sourcing); and
- (d) shall provide for the award of the contracts to the tender(s) offering best value for money while ensuring absence of conflict of interest.

3. The contractor generating results in pre-commercial procurement shall own at least the attached intellectual property rights. The contracting authorities shall enjoy royalty-free access rights to the results for their own use. If a contractor fails to commercially exploit the results within a given period after the pre-commercial procurement as identified in the contract, the contracting authorities *shall consult with the contractor and investigate the reasons for such lack of exploitation. After such consultation, the contracting authority* can require it to transfer any ownership of the results to the contracting authorities.

*3a. Specific provisions regarding ownership, access rights and licensing may be laid down in the contracts of public procurement of innovative solutions.*

## CA 23

### *Article 23*

#### **~~Cumulative funding~~**

~~An action that has received a contribution from another Union programme may also receive a contribution under the Programme, provided that the contributions do not cover the same costs. The rules of each contributing Union programme shall apply to its respective contribution to the action. The cumulative funding shall not exceed the total eligible costs of the action and the support from different Union programmes may be calculated on a pro-rata basis in accordance with the documents setting out the conditions for support.~~

## CA 24

### *Article 24*

#### ***Financial capacity of applicants***

1. By derogation from Article 198 of the Financial Regulation, the financial capacity shall be verified only for the coordinator and only if the requested funding from the Union for the action is equal to or greater than EUR 500 000.
2. However, if there are grounds to doubt the financial capacity or if there is a higher risk due to the participation in several ongoing actions funded by Union research and innovation programmes, the Commission or funding body shall verify also the financial capacity of other applicants or of coordinators below the threshold referred to in paragraph 1.
3. If the financial capacity is structurally guaranteed by another legal entity, the financial capacity of the latter shall be verified.
4. In case of weak financial capacity, the Commission or funding body may make participation of the applicant conditional on provision of a declaration on joint and several liability by an affiliated entity.
5. The contribution to the Mutual Insurance Mechanism set out in Article 33 shall be considered a sufficient guarantee under Article 152 of the Financial Regulation. No additional guarantee or security may be accepted from beneficiaries or imposed upon them.

## CA 25

## Article 25

### **Selection and award criteria**

1. A proposal shall be evaluated on the basis on the following award criteria:
  - (a) excellence;
  - (b) impact;
  - (c) quality and efficiency of the implementation.
2. Only the criterion referred to in point (a) of paragraph 1 shall apply to proposals for ERC frontier research actions. ***Only in cases when two or more excellent projects obtain the same ranking, the differentiation is made by applying the criteria referred to in point (b) or point (c) of paragraph 1.***
3. The work programme shall lay down further details of the application of the award criteria laid down in paragraph 1 ***including any weighting, thresholds and rules for dealing with ex-aequo proposals, taking into consideration the objectives of the call for proposals. The conditions for dealing with ex-aequo proposals may include, but not limited to the following criteria: SME, gender, widening countries participants.***
- 3.a. ***The Commission shall take into account the possibility of a two-stage submission procedure and where possible, anonymized proposals may be evaluated during the first stage of evaluation based on the award criteria referred to in paragraph 1.***

## CA 26

### Article 26

#### **Evaluation**

1. Proposals shall be evaluated by the evaluation committee which ***shall*** be :
    - composed of external independent experts,

***In the case of the EIC and missions, the evaluation committee may also include representatives of Union Institutions or bodies as referred to in Article 150 of the Financial Regulation.***

The evaluation committee may be assisted by independent experts.
  2. Where necessary, the evaluation committee shall rank the proposals having passed the applicable thresholds, according to:
    - the evaluation scores,
    - their contribution to the achievement of specific policy objectives, including the constitution of a consistent portfolio of projects.

The evaluation committee may ***only exceptionally and in duly justified cases*** propose adjustments to the proposals in as far as needed for the consistency of the portfolio.
- 2 a. The evaluation process shall avoid any conflict of interest and reputation bias. The transparency of the evaluation criteria and of the proposal scoring shall be guaranteed.***

## CA 27

### Article 27

#### **Evaluation review procedure, enquiries and complaints**

1. An applicant may request an evaluation review if it considers that the applicable evaluation procedure has not been correctly applied to its proposal.

2. An evaluation review applies only to the procedural aspects of the evaluation, not to the evaluation of the merits of the proposal.

***2 a. A request for review shall relate to a specific proposal and shall be submitted within 30 days after the communication of evaluation results. The review committee shall be chaired by and composed of representatives who were not involved in the call for proposals. The committee shall decide whether the proposal needs to be re-evaluated or the initial evaluation is confirmed. It shall do so without undue delay, without compromising the selection possibilities.***

3. An evaluation review shall not delay the selection process for proposals that are not the subject of review.

***3 a. The Commission shall ensure the existence of a procedure for participants to make direct enquiries and complaints about their involvement in Horizon Europe. Information on how to register enquiries or complaints is made available on-line.***

## CA 28

### Article 28 Time to grant

1. By derogation from the first subparagraph of Article 194(2) of the Financial Regulation, the following periods shall apply:

(a) for informing all applicants of the outcome of the evaluation of their application, a maximum period of five months from the final date for submission of complete proposals;

(b) for signing grant agreements with applicants, a maximum period of eight months from the final date for submission of complete proposals;

***(b a) for the specific grant signed under Fast Track to Research and Innovation, a maximum period of six months from the final date for submission of complete proposals.***

***Time to grant shall not affect the quality of evaluation.***

2. The work programme for the EIC may establish shorter periods.

3. In addition to the exceptions laid down in the second subparagraph of Article 194(2) of the Financial Regulation, the periods referred to in paragraph 1 may be exceeded for actions of the ERC, for missions and when actions are submitted to an ethics or security assessment.

## CA 29

### Article 29 Implementation of the grant

1.If a beneficiary fails to comply with its obligations regarding the technical implementation of the action, the other beneficiaries shall comply with those obligations without any additional Union funding, unless they are expressly relieved of that obligation. The financial responsibility of each beneficiary shall be limited to its own debt subject to the provisions relating to the Mutual Insurance Mechanism.

2.The grant agreement may establish milestones and related pre-financing instalments. If milestones are not met, the action may be suspended, amended, ***in case no corrective action is found***, or terminated, ***upon evaluation by independent experts***.

3. The action may also be terminated where expected results *and/or milestones* have lost their relevance for *both* the Union *and the beneficiaries* due to scientific, technological or economic reasons, including in the case of EIC and missions, their relevance as part of a portfolio of actions. *The Commission shall undergo a procedure with the action coordinator and if appropriate with external experts before it can decide to terminate an action.*

## CA 30

### Article 30

#### Funding rates

1. A single funding rate per action shall apply for all activities it funds. The maximum rate *per action* shall be fixed in the work programme.
2. The Programme may reimburse up to 100 % of total eligible costs of an action, except for:
  - (a) innovation actions: up to 70 % of the total eligible costs, except for non-profit legal entities, where the Programme may reimburse up to 100 % of the total eligible costs;
  - (b) programme co-fund actions: at least 30 % of the total eligible costs, and in identified and duly justified cases up to 70 %.
3. The funding rates determined in this Article shall also apply for actions where flat rate, unit or lump sum financing is fixed for the whole or part of the action.

## CA 31

### Article 31

#### Indirect costs

1. Indirect eligible costs shall be determined by applying a flat rate of 25 % of the total direct eligible costs, excluding direct eligible costs for subcontracting, financial support to third parties and any unit costs or lump sums which include indirect costs.

Where appropriate, indirect costs included in unit costs or lump sums shall be calculated using the flat rate set out in paragraph 1, except for unit costs for internally invoiced goods and services which shall be calculated on the basis of actual costs *allowing for allocation keys*, in accordance with the beneficiaries' usual costs accounting practices.

2. However, if provided for in the work programme, indirect costs may be declared in the form of a lump sum or unit costs.

## CA 32

### Article 32

#### Eligible costs

1. In addition to the criteria set out in Article 197 of the Financial Regulation, for the beneficiaries with project-based remuneration, costs of personnel are eligible up to the remuneration that the person is paid for work in similar projects funded by national schemes. *Limited to the duration of this Programme, in Member States eligible for widening actions, the hourly costs of personnel are eligible to the level representing 1.25 times the national level for the hourly remuneration for RDI projects funded by national schemes.* Project-based remuneration means remuneration that is linked to the participation of a person in projects, is part of the beneficiary's usual remuneration practices and is paid in a consistent manner.

2. By derogation from Article 190(1) of the Financial Regulation, costs of resources made available by third parties by means of in-kind contributions shall be eligible, up to the direct eligible costs of the third party.

3. By derogation from Article 192 of the Financial Regulation, income generated by the exploitation of the results shall not be considered as receipts of the action.

***3 a. Beneficiaries may use their usual accounting practices to identify and declare the costs incurred in relation to an action. The Commission may specify a limited number of further eligibility conditions in order to ensure the sound management of the grant. The Commission shall not reject accounting practices if their outcomes do not differ from its own and if they offer the same level of protection of the Union's financial interests.***

4. By derogation from Article 203(4) of the Financial Regulation, a certificate on the financial statements shall be mandatory at payment of the balance, if the amount claimed as actual costs and unit costs calculated in accordance with usual cost accounting practices is equal to or greater than EUR 325 000.

***Certificates on financial statements may be carried out by a competent and independent public officer empowered by the relevant national authorities to audit the beneficiary or an independent auditor qualified to carry out statutory audits of accounting documents in accordance with Directive 2006/43/EC.***

***4a. By derogation from Article 186(1) of the Financial Regulation, for the MSCA training and mobility actions, exclusively in the event of maternity or parental leave during the lifetime of the grant, the maximum grant amount shall be increased by the allowances due to the researcher in this respect.***

***4b. Costs generated by the responsible management of research data in line with the principles 'Findability', 'Accessibility', 'Interoperability' and 'Reusability' (FAIR) shall be eligible.***

CA 33

#### Article 33

### Mutual Insurance Mechanism

1. A Mutual Insurance Mechanism (the 'Mechanism') is hereby established which shall replace and succeed the fund set up in accordance with Article 38 of Regulation (EC) No 1290/2013. The Mechanism shall cover the risk associated with non-recovery of sums due by the beneficiaries:

- (a) to the Commission under Decision No 1982/2006/EC,
- (b) to the Commission and Union bodies under "Horizon 2020",
- (c) to the Commission and funding bodies under the Programme.

The coverage of the risk regarding funding bodies referred to in point (c) of the first subparagraph may be implemented through an indirect coverage system set out in the applicable agreement and taking into account the nature of the funding body.

2. The Mechanism shall be managed by the Union, represented by the Commission acting as executive agent. The Commission shall set up specific rules for the operation of the Fund.

3. Beneficiaries shall make a contribution of 5 % of the Union funding for the action. On the basis of **transparent** evaluations **carried out annually**, this contribution may be raised by the Commission up to 8% or may be reduced under 5%. The beneficiaries' contribution to the Mechanism may be offset from the initial pre-financing and be paid to the Fund on behalf of the beneficiaries.

4. The contribution of the beneficiaries shall be returned at the payment of the balance.

5. Any financial return generated by the Mechanism shall be added to the Mechanism. If the return is insufficient, the Mechanism shall not intervene and the Commission or funding body shall recover directly from beneficiaries or third parties any amount owed.

6. The amounts recovered shall constitute revenue assigned to the Mechanism within the meaning of Article 21(4) of the Financial Regulation. Once all grants whose risk is covered directly or indirectly by the Mechanism are completed, any sums outstanding shall be recovered by the Commission and entered into the budget of the Union.

7. The Mechanism may be **extended** to beneficiaries of any other directly managed Union programme. The Commission shall adopt modalities for participation of beneficiaries of other programmes

## CA 34

### Article 34

#### Ownership and protection

1. Beneficiaries shall own the results they generate. They shall ensure that any rights of their employees or any other parties in relation to the results can be exercised in a manner compatible with the beneficiaries' obligations in accordance with the terms and conditions laid down in the grant agreement.

Two or more beneficiaries shall own results jointly if:

- (a) they have jointly generated them; and
- (b) it is not possible to:
  - (i) establish the respective contribution of each beneficiary,

or

- (ii) separate them when applying for, obtaining or maintaining their protection.

The joint owners shall agree in writing on the allocation and terms of exercise of their joint ownership. Unless otherwise agreed **in the Consortium Agreement and/or in the joint ownership agreement**, each joint owner may grant non-exclusive licences to third parties to exploit the jointly-owned results (without any right to sub-license), if the other joint owners are given advance notice and fair and reasonable compensation. The joint owners may agree in writing to apply another regime than joint ownership.

2. Beneficiaries having received Union funding shall adequately protect their results if protection is possible and justified, taking into account all relevant considerations, including the prospects for commercial exploitation **and other legitimate interests such as data protection rules, privacy, intellectual property rights and security rules, coupled with the global economic competitiveness of the EU**. When deciding on protection, beneficiaries shall also consider the legitimate interests of the other beneficiaries in the action.

## CA 35

## Exploitation and dissemination

1. Beneficiaries having received Union funding shall **make** their best efforts to exploit their results, **especially** in the Union. Exploitation may be done directly by the beneficiaries or indirectly in particular through the transfer and licensing of results in accordance with Article 36.

The work programme may provide for additional exploitation obligations.

If despite a beneficiary's best efforts to exploit its results directly or indirectly no exploitation takes place within a given period as identified in the grant agreement **and as outlined in its Dissemination and Exploitation Plan, the exploitation activities may be transferred to another party upon agreement with the beneficiaries**. If justified on the basis of a request of the beneficiary, this obligation may be waived.

2. Beneficiaries shall disseminate their results as soon as possible, **in an open format**, subject to any restrictions due to the protection of intellectual property, security rules or legitimate interests.

The work programme may provide for additional dissemination obligations **while safeguarding EU's economic and scientific interests**.

3. Beneficiaries shall ensure that open access to scientific publications applies under the terms and conditions laid down in the grant agreement. In particular, the beneficiaries shall ensure that they or the authors retain sufficient intellectual property rights to comply with **FAIR** open access requirements.

**With regard to the dissemination of research data, the grant agreement shall, in the context of FAIR open access to and the preservation of research data, lay down terms and conditions under which fair access to such results shall be provided, ensuring opt-outs following the principle "as open as possible, as closed as necessary"**. Exceptions shall apply if justified, taking into consideration the legitimate interests of the beneficiaries and any other constraints, such as data protection rules, **privacy, confidentiality**, security rules, **trade secrets, legitimate commercial interests** or intellectual property rights **or Union's external competitiveness**.

The work programme may provide for additional **incentives** to adhere to open science practices.

4. Beneficiaries shall manage all research data **generated in a Horizon Europe action** in accordance with the terms and conditions laid down in the grant agreement and shall establish a Data Management Plan.

The work programme may **further encourage the** use the European Open Science Cloud for storing and giving access to research data.

5. Beneficiaries that intend to disseminate their results shall give advance notice to the other beneficiaries in the action. Any other beneficiary may object if it can show that the intended dissemination would significantly harm its legitimate interests in relation to its results or background. In such cases, the dissemination may not take place unless appropriate steps are taken to safeguard these legitimate interests.

6. Unless the work programme provides otherwise, proposals shall include a plan for the exploitation and dissemination of the results. If the expected exploitation entails developing, creating, manufacturing and marketing a product or process, or in creating and providing a service, the plan shall include a strategy for such exploitation. If the plan provides for exploitation primarily in non-associated third countries, the legal entities shall **justify** how that exploitation is still in the Union interest. The beneficiaries **may** further develop the plan during the action, **including through public engagement and science education**.

7. For the purposes of monitoring and dissemination by the Commission or funding body, the beneficiaries shall provide any *neccessary* requested information regarding the exploitation and dissemination of their results *in acordance with the the grant agreement*. Subject to the legitimate interests of the beneficiaries, such information shall be made publicly available.

## CA 36

### Article 36

#### Transfer and licensing

1. Beneficiaries may transfer ownership of their results. They shall ensure that their obligations also apply to the new owner and that the latter has the obligation to pass them on in any subsequent transfer.

2. Unless agreed otherwise in writing for specifically-identified third parties *and for its Affiliated Entities* or unless impossible under applicable law, beneficiaries that intend to transfer ownership of results shall give advance notice to any other beneficiary that still has access rights to the results. The notification must include sufficient information on the new owner to enable a beneficiary to assess the effects on its access rights.

Unless agreed otherwise in writing for specifically-identified third parties *and for its Affiliated Entities*, a beneficiary may object to the transfer if it can show that the transfer would adversely affect its access rights. In this case, the transfer may not take place until agreement has been reached between the beneficiaries concerned. *The grant agreement shall lay down time limits in this respect.*

3. Beneficiaries may grant licences to their results or otherwise give the right to exploit them, if this does not affect compliance with their obligations.

4. Where this is justified, the grant agreement shall lay down the right *for the Commission* to object to transfers of ownership of results, or to grants of an exclusive licence regarding results, if:

- (a) the beneficiaries generating the results have received Union funding;
- (b) the transfer or licence is to a legal entity established in a third country; and
- (c) the transfer or licence is not in line with Union interests.

*Technology transfer agreements shall be promoted.*

If the right to object applies, the beneficiary shall give advance notice. The right to object may be waived in writing regarding transfers or grants to specifically identified legal entities if measures safeguarding Union interests are in place.

## CA 37

### Article 37

#### Access rights

1. The following access rights principles shall apply:

- (a) a request to exercise access rights or any waiving of access rights shall be made in writing;
- (b) unless otherwise agreed with the grantor, access rights do not include the right to sub-license;

- (c) the beneficiaries shall inform each other before their accession to the grant agreement of any restrictions to granting access to their background;
  - (d) if a beneficiary is no longer involved in an action, it shall not affect its obligations to grant access;
  - (e) if a beneficiary defaults on its obligations, the beneficiaries may agree that it no longer has access rights.
2. Beneficiaries shall grant access to:
- (a) their results on a royalty-free basis to any other beneficiary in the action that needs it to implement its own tasks;
  - (b) their background to any other beneficiary in the action that needs it to implement its own tasks, subject to any restrictions referred to in paragraph 1(c); that access shall be granted on a royalty-free basis, unless otherwise agreed by the beneficiaries before their accession to the grant agreement;
  - (c) their results and, subject to any restrictions referred to in paragraph 1(c), to their background to any other beneficiary in the action that needs it to exploit its own results; that access shall be granted under fair and reasonable conditions to be agreed upon.
3. Unless otherwise agreed by the beneficiaries, they shall also grant access to their results and, subject to any restrictions referred to in paragraph 1(c), to their background to a legal entity that:
- (a) is established in a Member State or associated country;
  - (b) is under the direct or indirect control of another beneficiary, or is under the same direct or indirect control as that beneficiary, or is directly or indirectly controlling that beneficiary; and
  - (c) needs the access to exploit the results of that beneficiary.
- Access shall be granted under fair and reasonable conditions to be agreed upon.
4. A request for access for exploitation purposes may be made up to one year after the end of the action, unless the beneficiaries agree on a different time-limit.
5. Beneficiaries having received Union funding shall grant access to their results on a royalty-free basis to the Union institutions, bodies, offices or agencies for developing, implementing and monitoring Union policies or programmes. Access shall be limited to non-commercial and non-competitive use *taking into consideration the legitimate interests of the beneficiaries. Such access rights shall not extend to the participants background.*
- In actions under the cluster ‘Secure Society’, area of intervention ‘Protection and Security’, beneficiaries having received Union funding shall also grant access to their results on a royalty-free basis to Member States' national authorities, for developing, implementing and monitoring their policies or programmes in that area. Access shall be limited to non-commercial and non-competitive use and shall be granted upon bilateral agreement defining specific conditions aimed at ensuring that those rights will be used only for the intended purpose and that appropriate confidentiality obligations will be in place. The requesting Member State, Union institution, body, office or agency shall notify all Member States of such requests.
6. The work programme may provide, *where appropriate*, for additional access rights.

## Article 38

### **Specific provisions on exploitation and dissemination**

Specific rules on exploitation and dissemination, transfer and licensing as well as access rights may apply for ERC actions, **EIT actions**, training and mobility actions, pre-commercial procurement actions, public procurement of innovative solutions actions, programme co-fund actions and coordination and support actions.

These specific rules shall not change the obligations and *principles of open access as referred to in Article 10*.

## CHAPTER III

### **Prizes**

#### **CA 39**

## Article 39

### **Prizes**

1. Prizes under the Programme shall be awarded and managed in accordance with Title IX of the Financial Regulation, unless otherwise specified in this Chapter.
2. Any legal entity, regardless of its place of establishment, may participate in a contest, unless otherwise provided in the work programme or rules of contests.
3. The Commission or funding body may, *where appropriate*, organise prizes with:
  - (a) other Union bodies;
  - (b) third countries, including their scientific and technological organisations or agencies;
  - (c) international organisations; or
  - (d) non-profit legal entities.
4. The work programme or rules of contest **shall** include obligations regarding communication, **ownership, access rights**, exploitation and dissemination, **including licencing provisions**.

## CHAPTER IV

### **Procurement**

#### **CA 40**

## Article 40

### **Procurement**

1. Procurement under the Programme shall be awarded and managed in accordance with Title VII of the Financial Regulation, unless otherwise specified in this Chapter.
2. Procurement may also take the form of pre-commercial procurement or procurement of innovative solutions carried out by the Commission or the funding body on its own behalf or jointly with contracting authorities from Member States and associated countries. In this case, the rules set out in Article 22 shall apply.

*CHAPTER V*  
*Blending operations and blended finance*

CA 41

*Article 41*

**Blending operations**

Blending operations decided under this Programme shall be implemented in accordance with the InvestEU Programme and Title X of the Financial Regulation.

CA 42

*Article 42*

**Horizon Europe and EIC Blended finance**

1. The grant and reimbursable advance components of Horizon Europe or EIC blended finance shall be subject to Articles 30 to 33.
2. EIC blended finance shall be implemented in accordance with Article 43. The support under the EIC blended finance may be granted for risk projects until the action can be financed as a blending operation or as a financing and investment operation fully covered by the EU guarantee under InvestEU. By derogation from Article 209 of the Financial Regulation, the conditions laid down in paragraph (2) and, in particular, paragraph (a) and (d), do not apply at the time of the award of EIC blended finance
3. Horizon Europe blended finance may be awarded to a programme co-fund where a joint programme of Member States and associated countries provides for the deployment of financial instruments in support of selected actions. The evaluation and selection of such actions shall be made in accordance with Articles 11, 19, 20, 24 **25, 26, 42 a new and 43**. The implementation modalities of the Horizon Europe blended finance shall comply with Article 29, by analogy Article 43(9) and with additional **and justified** conditions defined by the work programme.
4. Repayments including reimbursed advances and revenues of Horizon Europe and EIC blended finance shall be considered as internal assigned revenues in accordance with Articles 21(3)(f) and 21(4) of Financial Regulation.
5. Horizon Europe and EIC blended finance shall be provided in a manner that ***promotes EU's competitiveness while avoiding distortion of*** competition.

CA 42a

*Article 42 a*

***The Pathfinder***

***1. The Pathfinder for Advanced Research***

***The Pathfinder's shall provide grants to high-risk cutting-edge projects aiming to develop the strategic autonomy of the Union into potentially radical innovative technologies of the future and new market opportunities. The Pathfinder shall initially support the earliest stages of scientific and technological research and development, including proof of concept and prototypes for technology validation.***

***The Pathfinder shall be mainly implemented through an open call for bottom-up proposals with regular cut-off dates per year and shall also provide for competitive challenges to develop key strategic objectives<sup>i</sup> calling for deep-tech and radical***

*thinking. Regrouping of selected projects into thematic or objective driven portfolios will allow establishing critical mass of efforts, technological strategic autonomy at EU level and structuring new multidisciplinary research communities.*

2. *Pathfinder transition activities*

*The Pathfinder's Transition activities shall be implemented to help innovators develop the pathway to commercial development in the Union, such as demonstration activities and feasibility studies to assess potential business cases, and support the creation of spin offs and start-ups.*

- (a) *the launch and the content of the calls for proposals shall be determined with regard to objectives and budget established by the work programme in relation with the concerned portfolio of actions;*
- (b) *grants for a fixed amount not exceeding EUR 50 000 may be awarded without a call for proposals, only to those activities already funded under the Pathfinder to carry out urgent coordination and support actions for reinforcing the portfolio's community of beneficiaries or assessing possible spin-offs or potential market creating-innovation.*

3. *The award criteria as defined in Article 25 shall apply to the EIC Pathfinder.*

CA 43

Article 43

**The Accelerator**

1. The beneficiary of the EIC Accelerator shall be a legal entity qualifying as a start-up, **scale-up**, an SME or as a mid-cap, established in a Member State or associated country. The proposal may be submitted by the beneficiary, or by one or more natural persons or legal entities intending to establish or support that beneficiary.
2. A single award decision shall cover and provide funding for all forms of Union contribution provided under EIC blended finance.
3. Proposals shall be evaluated on their individual merit by independent experts and selected in the context of an annual open call with cut-off dates, based on Articles 24 to 26, subject to paragraph 4.
4. Award criteria shall be:
  - excellence;
  - impact **and EU added value**;
  - the level risk of the action and the need for Union support.
5. With the agreement of applicants concerned, the Commission or funding bodies implementing Horizon Europe (**including EIT and KICs**) may directly submit for evaluation under the last evaluation criterion a proposal for an innovation and market deployment action **especially in the Union** which already fulfils the first two criteria, subject to the following cumulative conditions:
  - the proposal shall stem from any other action funded by Horizon 2020 or this Programme, or from a national programme and acknowledged by the Commission **as meeting EIC requirements**;
  - be based on a previous project review assessing the excellence and the impact of the proposal and subject to conditions and processes further detailed in the work programme.

6. A Seal of Excellence may be awarded subject to the following cumulative conditions:
  - the beneficiary is a start-up or an SME,
  - the proposal was eligible and has passed applicable thresholds for the first two award criteria referred to in paragraph 4,
  - for those activities that would be eligible under an innovation action.
7. For a proposal having passed the evaluation, independent experts shall propose a corresponding EIC blended finance, based on the risk incurred and the resources and time necessary to bring and deploy the innovation to the market.

The Commission may reject a proposal retained by independent experts for justified reasons, including **non-compliance** with the objectives of Union policies.
8. The grant or the reimbursable advance component of the blended finance shall not exceed 70% of the costs of the selected innovation action.
9. Implementation modalities of the equity and repayable support components of the EIC blended finance shall be detailed in Decision [Specific programme].
10. The contract for the selected action shall establish specific **measurable** milestones and the corresponding pre-financing and payments by instalments of the EIC blended finance.

Activities corresponding to an innovation action may be launched and first pre-financing of the grant or the reimbursable advance paid, prior to the implementation of other components of the awarded EIC blended finance. The implementation of those components shall be subject to the achievement of specific milestones established in the contract.
11. In accordance with the contract, the action shall be suspended, amended or terminated if **measurable** milestones are not met. It may also be terminated where the expected market deployment **especially in the Union** cannot be met.

The Commission may decide to increase the EIC blended finance subject to a project review by external independent experts:

## CA 43a

### *Article 43 a*

#### *SME Incremental innovation*

***In addition to the instruments under the EIC, an SME specific instrument for incremental innovation shall be centrally managed and implemented, supporting mono-beneficiary grants for R&I activities in all clusters, in a bottom-up manner through a continuously open call tailored to the needs of SMEs.***

### *Chapter VI* *Experts*

## Article 44

**Appointment of independent external experts**

1. By derogation from Article 237(3) of the Financial Regulation, *independent* external experts may *exceptionally* be selected without a call for expressions of interest, *only if a call for expressions of interest has not identified suitable external experts. Any selection of external experts without a call for expressions of interest shall be duly justified and the selection shall be carried out in a transparent manner. Such experts shall need to prove their independence and capacity to support Horizon Europe objectives.*
- 1 a. *Independent external experts shall be chosen on the basis of their skills, experience and knowledge appropriate for carrying out the task assigned to them. When appointing independent external experts the Commission or the EU funding body shall seek balanced representation and composition within the expert group and evaluation panels in terms of specialisation, geographical background, gender and type of organisation they represent.*
2. In accordance with Article 237(2) and 237(3) of the Financial Regulation, *independent* external experts shall be remunerated based on standard conditions.
3. In addition to paragraphs 2 and 3 of Article 38 of the Financial Regulation, the names of *independent* external experts evaluating grant applications, who are appointed in a personal capacity shall be published, together with their area of expertise, at least once a year on the internet site of the Commission or the funding body. Such information shall be collected, processed and published in accordance with the EU data protection rules.
- 3a. *The Commission or the relevant funding body shall ensure that an expert faced with a conflict of interest in relation to a matter on which the expert is required to provide an opinion does not evaluate, advise or assist on the specific matter in question.*
- 3 b. *An adequate number of independent experts shall be ensured for each call in order to guarantee the quality of the evaluation.*
- 3 c. *The level of remuneration of all independent and external experts shall be reported annually to the European Parliament and to the Council. It shall be covered by the administrative expenses of the programme.*

TITLE III  
PROGRAMME MONITORING, COMMUNICATION, EVALUATION AND  
CONTROL

## Article 45

**Monitoring and reporting**

- (1)** *The Commission shall monitor on an annual basis the implementation of Horizon Europe, its specific programme and the activities of the EIT. The annual monitoring reports shall include:*
- (i) *the indicators towards the achievement of the objectives established in Article 3 and set in Annex V along impact pathways;*

- (ii) *information on the implementation of the principles of funding and cross-cutting issues established in particular in Article 6a such as the level of mainstreaming social sciences and humanities, the ratio between lower and higher TRLs in collaborative research, widening countries participation, the list of widening countries updated in the work programmes the progress on reducing the RDI divide, the geographical coverage in collaborative projects, researchers salaries, the use of two stage submission and evaluation procedure, the use of the evaluation review and the level of complaints, the level of climate mainstreaming and related expenditures, SME participation including comparing with national similar SME specific instruments, private sector participation, progress on gender equality, the Seals of Excellence, the private-public partnerships as well as the leverage effect on additional private and public funding, the complementary and cumulative funding from other EU funds, in particular synergies with programmes referred to in Annex IV, use of research infrastructures supported by other EU funding programmes, the fast-track to research and innovation, the level and impact of international cooperation also as regards the reciprocity principle, engagement of citizens' and civil society participation both at national and EU level;*
- (iii) *the levels of expenditure per areas of intervention as referred to in Annex I and cross-cutting issues in the Programme and the EIT in order to allow for portfolio analysis, and in order to enhance transparency this data shall also be made publicly available in an accessible manner on the Commission's webpage according to the latest update;*
- (iv) *the level of oversubscription, in particular the number of proposals per budget line and per intervention areas, their average score, the share of proposals above and below thresholds.*
2. The Commission is empowered to adopt delegated acts in accordance with Article 50 concerning amendments to Annex V to supplement or amend the impact pathway indicators, where considered necessary, and set baselines and targets.
  3. The performance reporting system shall ensure that data for monitoring programme implementation and results are collected efficiently, effectively and in a timely manner *without increasing the administrative burden for beneficiaries. In particular, data for projects funded under ERC, European Partnerships, missions, EIC and EIT shall be included in the same database than actions funded directly under the Programme (i.e. E-corda database).*
- (3a) *Qualitative analysis from the Commission and Union or national funding bodies shall complement as much as possible quantitative data.*

CA 46

#### Article 46

#### Information, communication, publicity and dissemination and exploitation

1. The recipients of Union funding shall acknowledge the origin and ensure the visibility of the Union funding (in particular when promoting the actions and their results, *including for prizes*) by providing coherent, effective and proportionate targeted information to multiple audiences, including the media and the public.
2. The Commission shall implement information and communication actions relating to the Programme and its actions and results. *In particular, it shall provide timely and thorough information to Member States and beneficiaries.*

3. The Commission shall also establish a dissemination and exploitation strategy for increasing the availability and diffusion of the Programme's research and innovation results and knowledge to accelerate exploitation towards market uptake ***especially within the Union*** and boost the impact of the Programme. Financial resources allocated to the Programme shall also contribute to the corporate communication of the political priorities of the Union as well as information, communication, publicity, dissemination and exploitation activities as far as they are related to the objectives referred to in Article 3.

## CA 47

### Article 47

#### Programme evaluation

1. Programme evaluations shall be carried ***out in a timely manner and made public in order*** to feed into the decision-making process on the programme, its successor and other initiatives relevant to research and innovation.
  - 1.a. ***Missions shall be fully evaluated by 31 December 2022 before any decision is taken on creating new missions or on redirection, termination, continuation of missions or on an increase of their budget. The results of the evaluation of missions shall be made public and shall include, but not limited to, the analysis of their selection process and of their governance, focus and performance.***
2. The interim evaluation of the Programme shall be carried out once there is sufficient information available about the implementation of the Programme, but no later than ***three*** years after the start of the programme implementation. It shall include ***a portfolio analysis and*** an assessment of the long-term impact of previous Framework Programmes and shall form the basis to adjust programme implementation ***and/or review the programme***, as appropriate. ***It shall assess the Programme's effectiveness, efficiency, relevance, coherence, leverage effect, complementarity with other EU and national RDI funding programmes and EU added value. In particular, the impact of transferred funds from other EU programmes shall be assessed.***
3. At the end of the implementation of the Programme, but no later than ***three*** years after the end of the period specified in Article 1, a final evaluation of the Programme shall be completed by the Commission. It shall include an assessment of the long-term impact of previous Framework Programmes.
4. The Commission shall ***publish and disseminate the results and conclusions*** of the evaluations accompanied by its observations ***and shall present them*** to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.

## CA 48

### Article 48

#### Audits

1. The control system for the Programme shall ensure an appropriate balance between trust and control, taking into account administrative and other costs of controls at all levels, especially for beneficiaries. ***Audit rules shall be clear, consistent and coherent throughout the Programme.***
2. The audit strategy for the Programme shall be based on the financial audit of a representative sample of expenditure across the Programme as a whole. The

representative sample shall be complemented by a selection based on an assessment of the risks related to expenditure. Actions that receive joint funding from different Union programmes shall be audited only once, covering all involved programmes and their respective applicable rules.

3. In addition, the Commission or funding body may rely on combined systems reviews at beneficiary level. These combined reviews shall be optional for certain types of beneficiaries and shall consist in a systems and process audit, complemented by an audit of transactions, carried out by a competent independent auditor qualified to carry out statutory audits of accounting documents in accordance with Directive 2006/43/EC<sup>18</sup>. They may be used by the Commission or funding body to determine overall assurance on the sound financial management of expenditure and for reconsideration of ***eligibility of costs claimed and of*** the level of ex-post audits and certificates on financial statements.
4. In accordance with Article 127 of the Financial Regulation, the Commission or funding body ***shall*** rely on audits on the use of Union contributions carried out by other ***certified*** persons or entities, including by other than those mandated by the Union Institutions or bodies.
5. Audits may be carried out up to two years after the ***end date*** of the ***project***.
- 5 a. ***The Commission shall publish audit guidelines elaborated in cooperation with the European Court of Auditors. Auditors shall ensure the transparency of the audit they have conducted, as well as reliable and uniform interpretation of audit rules throughout the duration of the Programme, in order to ensure legal certainty.***

#### Article 50

#### 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 referred to in Article 45(2) shall be conferred on the Commission until 31 December 2028.
3. The delegation of power referred to in Article 45(2) may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of 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. Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement on Better Law-Making of 13 April 2016.
5. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.
6. A delegated act adopted pursuant to Article 45(2) shall enter into force if no objection has been expressed either by the European Parliament or by the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both

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<sup>18</sup> Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts, amending Council Directive 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC (OJ L 157, 9.6.2006, p. 87)

informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.

## ANNEX I

### BROAD LINES OF ACTIVITIES

The general and specific objectives set out in Article 3 will be pursued across the Programme, through the areas of intervention and the broad lines of activity described in this Annex, as well as in Annex I to the Specific Programme.

#### **(1) Pillar I 'Excellent and Open Science'**

Through the following activities, this pillar will, in line with Article 4, support the creation and diffusion of high-quality knowledge skills, technologies and solutions to global challenges. It will also contribute to the other Programme's specific objectives as described in Article 3.

- (a) European Research Council: Providing attractive and flexible funding to enable talented and creative individual researchers, **with emphasis on young researchers**, and their teams to pursue the most promising avenues at the frontier of science, on the basis of Union-wide competition.

Area of intervention: Frontier science

- (b) Marie Skłodowska-Curie Actions: Equipping researchers with new knowledge and skills through mobility and exposure across borders, sectors and disciplines, as well as structuring and improving institutional and national recruitment, training and career development systems; in so doing, the Marie Skłodowska-Curie Actions help to lay the foundations of Europe's excellent research landscape ***across the whole Europe***, contributing to boosting jobs, growth, and investment, and solving current and future societal challenges.

*Areas of intervention*: Nurturing excellence through mobility of researchers across borders, sectors and disciplines; fostering new skills through excellent training of researchers; strengthening human **resources** and skills development across the European Research Area; improving and facilitating synergies; promoting public outreach.

- (c) Research Infrastructures: Endowing Europe with world-class sustainable research infrastructures which are open, and accessible to the best researchers from Europe and beyond. In so doing the potential of the infrastructure to support scientific advance and innovation, and to enable open science, will be enhanced, alongside activities in related Union policy and international cooperation.

*Areas of intervention*: Consolidating the landscape of European research infrastructures; Opening, integrating and interconnecting research infrastructures; Reinforcing European research infrastructure policy and international cooperation

#### **(2) Pillar II 'European Industrial Leadership and Global Challenges'**

Through the following activities, this pillar will, in line with Article 4, strengthen the impact of research and innovation in developing, supporting and implementing Union policies, and support the uptake of innovative solutions in industry and society to address

global challenges. It will also contribute to the other Programme's specific objectives as described in Article 3.

To maximise impact flexibility and synergies, research and innovation activities will be organised in *six* clusters, *interconnected through pan-European research infrastructures*, which individually and together will incentivise interdisciplinary, cross-sectoral, cross-policy, cross-border and international cooperation. *The six clusters will also support innovation of individual SMEs in a bottom-up manner through grants.*

Each cluster contributes towards several SDGs; and many SDGs are supported by more than one cluster.

The R&I activities will be implemented in and across the following clusters:

- (a) Cluster 'Health': Improving and protecting the health of citizens at all ages, by developing innovative solutions to prevent, diagnose, monitor, treat and cure diseases *and producing health technologies*; mitigating health risks, protecting populations and promoting good health; making public health systems more cost-effective, equitable and sustainable; and supporting and enabling patients' participation and self-management.

*Areas of intervention:* Health throughout the life course; Environmental and social health determinants; Non-communicable and rare diseases; Infectious diseases; Tools, technologies and digital solutions for health and care; Health care systems

- (b) Cluster 'Inclusive and creative society': Strengthening European democratic values, including rule of law and fundamental rights, safeguarding our cultural heritage, *exploring the potential of cultural and creative sectors*, and promoting socio-economic transformations that contribute to inclusion and growth, including *migration management and integration of migrants*.

*Areas of intervention:* Democracy; Culture *and creativity*; Social, *cultural* and economic transformations; *social sciences and humanities*.

- (c) Cluster 'Digital and Industry': Reinforcing capacities and securing Europe's sovereignty in key enabling technologies for digitisation and production, and in space technology, to build a competitive, digital, low-carbon and circular industry; ensure a sustainable supply of raw materials; and provide the basis for advances and innovation in all global societal challenges.

*Areas of intervention:* Manufacturing technologies; Digital technologies; Advanced materials; Artificial intelligence and robotics; Next generation internet; *Quantum technologies*; High performance computing and Big Data; Circular industries; Low carbon and clean industry; Space

- (c a) Cluster 'Secure Society': responding to the challenges arising from persistent security threats, including cybercrime, as well as natural and man-made disasters.

*Areas of intervention:* Organised crime; terrorism, extremism, radicalisation and ideologically motivated violence; Border protection management; Cyber-Security, privacy, data protection; Protecting critical infrastructures and *improving disaster response*; Piracy and counterfeit of products; Supporting the Union's external security policies, including through conflict prevention and peace-building; Promoting coordination, cooperation and synergies.

- (d) Cluster 'Climate, Energy and Mobility': Fighting climate change by better understanding its causes, evolution, risks, impacts and opportunities, and by

making the energy and transport sectors more climate and environment-friendly, more efficient and competitive, smarter, safer and more resilient; ***promote the use of renewable energy sources and behavioural change.***

*Areas of intervention:* Climate science and solutions; Energy supply; Energy systems and grids; Buildings in energy transition; ***Industrial facilities in the energy transition; Coal regions in transition;*** Communities and cities; Industrial competitiveness in transport; Clean transport and mobility; Smart mobility; Energy storage,

- (e) Cluster 'Food, Natural Resources ***and Agriculture***': Protecting, restoring, sustainably managing and using natural and biological resources from land and ***water*** sea to address food and nutrition security and the transition to a low carbon, resource efficient circular economy.

*Areas of intervention:* Environmental observation; Biodiversity and natural capital; Agriculture, forestry and rural areas; Seas, oceans, ***inland waters and the Blue Economy***; Food systems; Bio-based innovation systems; Circular systems

- (f) Non-nuclear direct actions of the Joint Research Centre: Generating high-quality scientific evidence for good public policies. New initiatives and proposals for EU legislation need transparent, comprehensive and balanced evidence, whereas implementation of policies needs evidence to measure and monitor progress. The JRC will provide Union policies with independent scientific evidence and technical support throughout the policy cycle. The JRC will focus its research on EU policy priorities.

*Areas of intervention:* Health; ***Inclusive and creative society; Secure society;*** digital, industry ***and space***; climate, energy and mobility; food and natural resources; support to the functioning of the internal market and the economic governance of the Union; support to Member States with implementation of legislation and development of smart specialisation strategies; analytical tools and methods for policy making; knowledge management; knowledge and technology transfer; support to science for policy platforms.

### **(3) Pillar III 'Innovative Europe'**

Through the following activities, this pillar will, in line with Article 4, foster all forms of innovation, including breakthrough ***technological and social*** innovation, and strengthen market deployment of innovative solutions, ***in particular by start-ups and SMEs working together with research institutions.*** It will also contribute to the Programme's other specific objectives as described in Article 3.

- (a) European Innovation Council: promoting breakthrough innovation with scale-up potential at global level

*Areas of intervention:* Pathfinder, supporting future and emerging breakthrough technologies; Accelerator, bridging the financing gap between late stages of innovation activities and market take-up, to effectively deploy breakthrough market-creating innovation and scale up companies where the market does not provide viable financing; additional activities such as prizes and fellowships, and business added-value services.

- (b) European innovation ecosystems

*Areas of intervention:* Connecting with regional and national innovation actors and supporting the implementation of joint cross-border innovation

programmes by Member States and associated countries, from the enhancement of soft skills for innovation to research and innovation actions, to boost the effectiveness of the European innovation system. This will complement the ERDF support for innovation eco-systems and interregional partnerships around smart specialisation topics.

(c) The European Institute of Innovation and Technology

*Areas of intervention:* Sustainable innovation ecosystems across Europe; Entrepreneurial and innovation skills in a lifelong learning perspective and the entrepreneurial transformation of EU universities; Bring new solutions to global societal challenges to the market; Synergies and value added within Horizon Europe.

**4) Part 'Strengthening the European Research Area'**

Through the following activities, this part will, in line with Article 4, optimise the Programme's delivery for increased impact *and attractiveness* within a strengthened European Research Area. It will also support the Programme's other specific objectives as described in Article 3. While underpinning the entire Programme, this part will support activities that contribute to *attract talent in the Union and tackle brain drain. It will also contribute to* a more knowledge-based and innovative and gender-equal Europe, at the front edge of global competition, thereby optimising national strengths and potential across *the whole of* Europe in a well-performing European Research Area (ERA), where knowledge and a highly skilled workforce circulate freely *in a balanced manner*, where the outcomes of R&I are understood and trusted by informed citizens and benefit society as a whole, and where EU policy, notably R&I policy, is based on high quality scientific evidence.

*Areas of intervention: Spreading Excellence and widening participation through teaming, twinning, ERA-Chairs initiatives, COST, Excellence initiatives and widening fellowships;* Reforming and enhancing the European R&I system.

## ANNEX II

### TYPES OF ACTION (please confirm last part of this Annex)

The programme will be implemented using a limited number of 'types of action', characterised by their distinct objectives or conditions.

The main types of action are as follows:

- Research and innovation action: action primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution. This may include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment. ***The Fast Track to Research and Innovation logic will be applied for a selected number of collaborative research and innovation actions;***
- Innovation action: action primarily consisting of activities directly aimed at producing plans and arrangements or designs for new, altered or improved products, processes or services, possibly including prototyping, testing, demonstrating, piloting, large-scale product validation and market replication;
- Innovation and market deployment actions: actions embedding an innovation action and other activities necessary to deploy an innovation in the market, including the scaling-up of companies, providing Horizon Europe blended finance (a mix of grant-type funding and private finance);
- ERC frontier research: principal investigator-led research actions, hosted by single or multiple beneficiaries (ERC only);
- Training and mobility action: action geared towards improvement of skills, knowledge and career prospects of researchers based on mobility between countries, and, if relevant, between sectors or disciplines;
- Programme co-fund action: action to provide co-funding to a programme of activities established and/or implemented by entities managing and/or funding research and innovation programmes, other than Union funding bodies. Such a programme of activities may support ***interconnection***, networking and coordination, research, innovation, pilot actions, and innovation and market deployment actions, training and mobility actions, awareness raising and communication, dissemination and exploitation, or a combination thereof, directly implemented by those entities or by third parties to whom they may provide any relevant financial support such as grants, prizes, procurement, as well as Horizon Europe blended finance;
- Pre-commercial procurement action: action with the primary aim of realising pre-commercial procurement implemented by beneficiaries that are contracting authorities or contracting entities;
- Public procurement of innovative solutions action: action with the primary aim of realising joint or coordinated public procurement of innovative solutions implemented by beneficiaries that are contracting authorities or contracting entities;
- Coordination and support action: action contributing towards the objectives of the Programme, excluding research and innovation activities, such as standardisation,

dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies;

- Inducement prize: prize to spur investment in a given direction, by specifying a target prior to the performance of the work;
- Recognition prize: prize to reward past achievements and outstanding work after it has been performed;

Public procurement: to implement parts of the programme related to strategic interests and autonomy of the Union and to organise, for the Commission's own purposes, public procurements for studies, products, services and capabilities; public procurement may also take the form of pre-commercial procurement or public procurement of innovative solutions carried out by the Commission or funding bodies on their own behalf or jointly with contracting authorities and contracting entities from Member States and associated countries.

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- Indirect actions: research and innovation activities to which the Union provides financial support and which are undertaken by participants;
- Direct actions: research and innovation activities undertaken by the Commission through its Joint Research Centre (JRC).

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## ANNEX III

### PARTNERSHIPS

European Partnerships will be selected, implemented, monitored, evaluated and phased-out on the basis of the following criteria:

#### 1) Selection:

- (a) Evidence that the European Partnership is more effective in achieving the related objectives of the Programme, in particular in delivering clear impacts for *throughout the Union* and *for* its citizens, notably in view of delivering on global challenges and research and innovation objectives, securing EU competitiveness, *sustainability* and contributing to the strengthening of the European Research and Innovation Area and international commitments;

In the case of institutionalised European Partnerships established in accordance with Article 185 TFEU, the participation of at least 50% of the EU Member States is mandatory;

- (b) Coherence and synergies of the European Partnerships within the EU research and innovation landscape, *including national and regional strategies*;
- (c) Transparency and openness of the European Partnerships as regards the identification of priorities and objectives, *as well as their governance*, and the involvement of partners, and stakeholders from different sectors *and backgrounds*, including international ones when relevant.
- (d) Ex-ante demonstration of additionality and directionality of the European Partnership, including a common vision of the purpose of the European Partnership. This vision will include in particular:
  - identification of measurable expected outcomes, deliverables and impacts within specific timeframes, including key economic value for *EU*;
  - demonstration of *strong* expected qualitative and quantitative leverage effects;
  - approaches to ensure flexibility of implementation and to adjust to changing policy, *societal and/or* market needs, or scientific advances;
  - exit-strategy and phasing-out measures.
- (e) Ex-ante demonstration of the partners' long term commitment, including a minimum share of public and/or private investments;

In the case of institutionalised European Partnerships, the financial and/or in-kind, contributions from partners other than the Union, will at least be equal to 50% *in case of partnerships between the Union and private partners*, and may reach up to 75%, *in case of partnerships involving also Member States*, of the aggregated European Partnership budgetary commitments.

- (e a) *In agreement with regional authorities, ERDF shall be accepted as a partial national contribution for Programme co-fund actions involving Member States.*

## 2) Implementation:

- a) Systemic approach ensuring achievement of the expected impacts of the European Partnership through the flexible implementation of joint actions going beyond joint calls for research and innovation activities, including those related to market, regulatory or policy uptake;
- b) Appropriate measures ensuring continuous openness of the initiative and transparency during implementation, notably for priority setting and for participation in calls for proposals, visibility of the Union, communication and outreach measures, dissemination and exploitation of results, including clear open access/user strategy along the value chain;
- c) Coordination and/or joint activities with other relevant research and innovation initiatives ***to secure optimum level of interconnections and ensure*** effective synergies;
- d) Legally binding commitments, in particular for ***in kind and/or*** financial contributions, from each partner throughout the lifetime of the initiative;
- e) In the case of institutionalised European Partnership access to the results and other action related information for the Commission for the purpose of developing, implementing and monitoring of Union policies or programmes.

## 3) Monitoring:

- a) A monitoring system in line with the requirements set out in Article 45 to track progress towards ***programmes*** specific policy goals/objectives, deliverables and key performance indicators allowing for an assessment over time of achievements, impacts and potential needs for corrective measures;
- b) Dedicated reporting on quantitative and qualitative leverage effects, including on financial and in-kind contributions, visibility and positioning in the international context, impact on research and innovation related risks of private sector investments.

## 4) Evaluation, phasing-out and renewal:

- a. Evaluation of impacts achieved at Union and national level in relation to defined targets and key performance indicators, feeding into the Programme evaluation set out in Article 47, including an assessment of the most effective policy intervention mode for any future action; and the positioning of any possible renewal of a European Partnership in the overall European Partnerships landscape and its policy priorities;
- b. ***In the absence of renewal***, appropriate measures ensuring phasing-out according to the agreed ***timeline and*** conditions ***agreed with the legally committed partners***, without prejudice to possible continued transnational funding by national or other Union programmes, ***and without prejudice to private investment and ongoing projects***.

## ANNEX IV

### SYNERGIES WITH OTHER PROGRAMMES

1. Synergies with the European Agricultural Guarantee Fund and the European Agricultural Fund for Rural Development (Common Agricultural Policy-CAP) will ensure that:
  - (a) research and innovation needs of the agricultural sector and rural areas within the EU are identified notably within the European Innovation Partnership "agricultural productivity and sustainability"<sup>19</sup> and taken into consideration in the Programme's strategic research and innovation planning process and the work programmes;
  - (b) the CAP makes the best use of research and innovation results and promotes the use, implementation and deployment of innovative solutions, including those stemming from projects funded by the Framework Programmes for research and innovation, from the European Innovation Partnership "agricultural productivity and sustainability" *and relevant EIT Knowledge and Innovation Communities (KICs)*;
  - (c) the EAFRD supports the uptake and dissemination of knowledge and solutions stemming from the Programme's results leading to a more dynamic farming sector and new openings for the development of rural areas.
  
2. Synergies with the European Maritime and Fisheries Fund (EMFF) will ensure that:
  - (a) the Programme and the EMFF are largely interlinked as EU research and innovation needs in the field of marine and maritime policy will be translated through the Programme's strategic research and innovation planning process;
  - (b) the EMFF supports the rolling out of novel technologies and innovative products, processes and services, in particular those resulting from the Programme in the fields of marine and maritime policy; the EMFF also promotes ground data collection and data processing and disseminates relevant actions supported under the Programme, which in turn contributes to the implementation of the Common Fisheries Policy, the EU Maritime Policy, International Ocean Governance and *International commitments*.
  
3. Synergies with the European Regional Development Fund (ERDF) will ensure that:
  - (a) arrangements for combined funding from ERDF and *Horizon Europe* are used to support activities providing a bridge between *regional Operational Programmes*, smart specialisations strategies and international excellence in research and innovation, including joint trans-regional/trans-national programmes and pan European Research Infrastructures, with the aim of strengthening the European Research Area;

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<sup>19</sup> Communication from the Commission to the European Parliament and the Council on the European Innovation Partnership 'Agricultural Productivity and Sustainability' (COM(2012) 79 final).

- (a a) ***ERDF funds can be transferred on a voluntary basis to support activities of the Programme, in particular Seal of excellence;***
  - (b) the ERDF focuses amongst others on the development and strengthening of regional and local research and innovation ecosystems and industrial transformation, including support to the take-up of results and the rolling out of novel technologies and innovative solutions from the Framework Programmes for research and innovation through the ERDF;
  - (b a) ***existing regional ecosystems, platform networks and regional strategies are enhanced;***
- 4. Synergies with the European Social Fund Plus (ESF+) will ensure that:
  - (a) the ESF+ can mainstream and scale up innovative curricula supported by the Programme, through national or regional programmes, in order to equip people with the skills and competences needed for the jobs of the future;
  - (b) arrangements for complementary funding from ESF+ can be used ***on a voluntary basis*** to support activities ***of the Programme that promote*** human capital development in research and innovation with the aim of strengthening the European Research Area;
  - (c) the Health strand of the European Social Fund+ mainstreams innovative technologies and new business models and solutions, in particular those resulting from the Programmes, so to contribute to innovative, efficient and sustainable health systems of the Member States and facilitate access to better and safer healthcare for European citizens.
- 5. Synergies with the Connecting Europe Facility (CEF) will ensure that:
  - (a) research and innovation needs in the areas of transport, energy and in the digital sector within the EU are identified and established during the Programme's strategic research and innovation planning process;
  - (b) the CEF supports the large-scale roll-out and deployment of innovative new technologies and solutions in the fields of transport, energy and digital physical infrastructures, in particular those resulting from the Framework Programmes for research and innovation;
  - (c) the exchange of information and data between the Framework Programme and CEF projects will be facilitated, for example by highlighting technologies from the Framework Programme with a high market readiness that could be further deployed through the CEF.
- 6. Synergies with the Digital Europe Programme (DEP) will ensure that:
  - (a) whereas several thematic areas addressed by the Programme and DEP converge, the type of actions to be supported, their expected outputs and their intervention logic are different and complementary;
  - (b) research and innovation needs related to digital aspects are identified and established in the Programme's strategic research and innovation plans; this includes research and innovation for High Performance Computing, Artificial Intelligence, Cybersecurity, ***Distributed Ledger Technologies, Quantum Technologies*** combining digital with other enabling technologies and non-technological innovations; support for the scale-up of companies introducing breakthrough innovations (many of which will combine digital and physical technologies; the integration of digital across all the pillar 'Global Challenges and

*European* Industrial Competitiveness'; and the support to digital research infrastructures;

- (c) DEP focuses on large-scale digital capacity and infrastructure building in High Performance Computing, Artificial Intelligence, Cybersecurity, ***Distributed Ledger Technologies, Quantum Technologies*** and advanced digital skills aiming at wide uptake and deployment across Europe of critical existing or tested innovative digital solutions within an EU framework in areas of public interest (such as health, public administration, justice and education) or market failure (such as the digitisation of businesses, notably small and medium enterprises); DEP is mainly implemented through coordinated and strategic investments with Member States, notably through joint public procurement, in digital capacities to be shared across Europe and in EU-wide actions that support interoperability and standardisation as part of developing a Digital Single Market;
- (d) DEP capacities and infrastructures are made available to the research and innovation community, including for activities supported through the Programme including testing, experimentation and demonstration across all sectors and disciplines;
- (e) novel digital technologies developed through the Programme, are progressively be taken up and deployed by DEP;
- (f) the Programme's initiatives for the development of skills and competencies curricula, including those delivered at the co-location centres of the European Institute of Innovation and ***Technology Knowledge and Innovation Communities***, are complemented by Digital Europe-supported capacity-building in advanced digital skills;
- (g) strong coordination mechanisms for strategic programming and operating procedures for both programmes are aligned, and their governance structures involve the respective Commission services as well as others concerned by the different parts of the respective programmes.

7. Synergies with the Single Market Programme will ensure that:

- (a) the Single Market Programme addresses the market failures which affect all SMEs, and will promote entrepreneurship and the creation and growth of companies. Full complementarity exists between the Single Market Programme and the actions ***both the EIT and*** of the future European Innovation Council for innovative companies, as well as in the area of support services for SMEs, in particular where the market does not provide viable financing;
- (b) the Enterprise Europe Network may serve, as other existing SME support structures (e.g. National Contact Points, Innovation Agencies, ***DIH, Competence Centres, certified incubators***), to deliver support services under ***the Horizon Europe programme, including*** the European Innovation Council.

8. Synergies with the LIFE - Programme for Environment and Climate Action (LIFE) will ensure that:

Research and innovation needs to tackle environmental, climate and energy challenges within the EU are identified and established during the Programme's strategic research and innovation planning process. LIFE will continue to act as a catalyst for implementing EU environment, climate and relevant energy policy and legislation, including by taking up and applying research and innovation results from the Programme and help deploying them at national and (inter-)regional scale where it can help address environmental, climate or clean energy transition issues. In particular LIFE will continue to incentivise synergies with the Programme through the award of a bonus

during the evaluation for proposals which feature the uptake of results from the Programme. LIFE standard action projects will support the development, testing or demonstration of suitable technologies or methodologies for implementation of EU environment and climate policy, which can subsequently be deployed at large scale, funded by other sources, including by the Programme. The Programme's ***EIT as well as the future*** European Innovation Council can provide support to scale up and commercialise new breakthrough ideas that may result from the implementation of LIFE projects.

9. Synergies with the Erasmus Programme will ensure that:
  - (a) combined resources from the Programme and the Erasmus Programme are used to support activities dedicated to strengthening and modernising European higher education institutions. The Programme will complement Erasmus programme support for the European Universities initiative, in particular its research dimension as part of developing new joint and integrated long term and sustainable strategies on education, research and innovation based on trans-disciplinary and cross-sectoral approaches to make the knowledge triangle a reality, providing impetus to economic growth; ***the EIT's educational activities could be both inspirational for and interlinked with the European Universities initiative.***
  - (b) the Programme and the Erasmus Programme foster the integration of education and research through facilitating higher education institutions to formulate and set up common education, research and innovation strategies, to inform teaching with the latest findings and practices of research to offer active research experience to all students and higher education staff and in particular researchers, and to support other activities that integrate higher education, research and innovation.
10. Synergies with the European Space Programme will ensure that:
  - (a) research and innovation needs of the space upstream and downstream sector within the EU are identified and established as part of the Programme's strategic research and innovation planning process; space research actions implemented through Horizon Europe will be implemented with regard to procurement and eligibility of entities in line with the provisions of the Space Programme, where appropriate;
  - (b) space data and services made available as a public good by the European Space Programme are used to develop breakthrough solutions through research and innovation, including in the Framework Programme, in particular for sustainable food and natural resources, climate monitoring, smart cities, automated vehicles, security and disaster management;
  - (c) the Copernicus Data and Information Access Services contribute to the European Open Science Cloud and thus facilitate access to Copernicus data for researchers and scientists; research infrastructures, in particular in situ observing networks will constitute essential elements of the in situ observation infrastructure enabling the Copernicus services, and in turn, they benefit from information produced by Copernicus services.
11. Synergies with the Neighbourhood, Development and International Cooperation Instrument (the 'External Instrument') will ensure that the Programme's research and innovation activities with the participation of Third Countries and targeted international cooperation actions seek alignment and coherence with parallel market uptake and capacity-building actions strands under the External Instrument, based on joint

- definition of needs and areas of intervention commonly defined during the Programme's strategic research and innovation planning process.
12. Synergies with the Internal Security Fund and the instrument for border management as part of the Integrated Border Management Fund will ensure that:
    - (a) the research and innovation needs in the areas of security and integrated border management are identified and established during the Programme's strategic research and innovation planning process;
    - (b) the Internal Security Fund and the Integrated Border Management Fund support the deployment of innovative new technologies and solutions, in particular those resulting from the Framework Programmes for research and innovation in the field of security research.
  13. Synergies with the InvestEU Fund will ensure that:
    - (a) the Programme provide out of its own budget Horizon Europe and EIC blended finance for innovators, characterised by a high level of risk and for which the market does not provide when relevant viable and sustainable financing, and at the same time will provide for appropriate coordination in support of the effective delivery and management of the private finance part of the blended finance through funds and intermediaries supported by InvestEU;
    - (b) financial instruments for research and innovation and SMEs are grouped together under the InvestEU Fund, in particular through a dedicated R&I thematic window, and through products deployed under the SME window targeting innovative companies, in this way also helping to deliver the objectives of the Programme. ***Strong complementary links will be established between InvestEU and Horizon Europe.***
  14. Synergies with the Innovation Fund under the Emission Trading Scheme (the 'Innovation Fund') will ensure that:
    - (a) the Innovation Fund will specifically target innovation in low-carbon technologies and processes, including environmentally safe carbon capture and utilisation that contributes substantially to mitigate climate change, as well as products substituting carbon intensive ones, and to help stimulate the construction and operation of projects that aim at the environmentally safe capture and geological storage of CO<sub>2</sub> as well as innovative renewable energy and energy storage technologies. ***An appropriate framework will be created to enable and to incentivize "greener" products with a sustainable added value for the customers / end-users.***
    - (b) the Programme will fund the development, demonstration ***and implementation*** of technologies, ***including breakthrough solutions***, that can deliver ***on a low-carbon economy and the Union's*** decarbonisation, energy and industrial transformation objectives, especially in its Pillar 2 ***and through the EIT***;
    - (c) the Innovation Fund may, subject to fulfilment of its selection and award criteria, support the demonstration phase of eligible projects. ***Projects receiving support from the Innovation Fund may be eligible for*** support from the Framework Programmes for research and innovation and vice versa. ***To complement Horizon Europe, the Innovation Fund may concentrate on close to the market innovations contributing to a significant and fast reduction of CO<sub>2</sub> emissions. Strong complementary links will be established between Innovation Fund and Horizon Europe.***
  15. Synergies with the Euratom Research and Training Programme will ensure that:

- (a) the Programme and the Euratom Research and Training Programme develop comprehensive actions supporting education and training (including Marie Skłodowska-Curie Actions) with the aim of maintaining and developing relevant skills in Europe;
- (b) the Programme and the Euratom Research and Training Programme develop joint research actions focussing on cross-cutting aspects of the safe and secure use of non-power applications of ionising radiation in sectors such as medicine, industry, agriculture, space, climate change, security and emergency preparedness and contribution of nuclear science.

**16. *Potential synergies with the European Defence Fund will contribute to avoiding duplication.***

**16 a. *Synergies with Creative Europe will support competitiveness and innovation, contributing to economic and social growth and promoting effective use of public funds.***

**16.b. *Synergies with any Important Projects of Common European Interest (IPCEI) may be envisaged.***

**ANNEX V****KEY IMPACT PATHWAY INDICATORS**

Impact pathways, and related key impact pathway indicators, shall structure the monitoring of the Framework Programme's (FP) performance towards its objectives *as defined in Article 3*. The impact pathways are time-sensitive *and reflect four complementary impact categories reflecting the non-linear nature of R&I investments: scientific, societal, economic and European Research Area. For each of these impact categories, proxy indicators will be used to track on progress* distinguishing between the short, medium and longer term, *with relevant breackdown, and distinguishing between Member States and Associated countries*. Individual Programme parts will contribute to these indicators to a different degree and through different mechanisms. Additional indicators may be used to monitor individual programme parts, where relevant.

The micro-data behind the key impact pathway indicators will be collected for all parts of the Programme and all delivery mechanisms in a centrally managed and harmonised way and at the appropriate level of granularity, with minimal reporting burden on the beneficiaries. *Empirical evidence and indicators must be accompanied as much as possible by qualitative analysis.*

**Scientific impact pathway indicators**

The Programme is expected to have scientific impact by creating high-quality new knowledge, strengthening human capital in research and innovation, and fostering diffusion of knowledge and Open Science. Progress towards this impact will be monitored through proxy indicators set along the following three key impact pathways.

<b>Towards scientific impact</b>	<b>Short-term</b>	<b>Medium-term</b>	<b>Longer-term</b>
<b>Creating high-quality new knowledge</b>	<u>Publications</u> - Number of FP peer reviewed scientific publications	<u>Citations</u> - Field-Weighted Citation Index of FP peer reviewed publications	<u>World-class science</u> - Number and share of peer reviewed publications from FP projects that are core contribution to scientific fields
<b>Strengthening human capital in R&amp;I</b>	<u>Skills</u> - Number of researchers having benefitted from upskilling activities in FP projects	<u>Careers</u> - Number and share of upskilled FP researchers with more influence in their R&I field	<u>Working conditions</u> - Number and share of upskilled FP researchers with improved working conditions

	(through training, mentoring/coaching, mobility and access to R&I infrastructures)		
<b>Fostering diffusion of knowledge and Open Science</b>	<u>Shared knowledge</u> - Share of FP research outputs (open data/ publication/ software etc.) shared through open knowledge infrastructures	<u>Knowledge diffusion</u> - Share of open access FP research outputs actively used/cited	<u>New collaborations</u> - Share of FP beneficiaries having developed new transdisciplinary/ trans-sectoral collaborations with users of their open FP R&I outputs

## Societal impact pathway indicators

The Programme is expected to have societal impact by addressing *global challenges as defined in Pillar II including UN SDGs as well as* EU policy priorities *and commitments* through R&I, delivering benefits and impact through R&I missions and strengthening the uptake of innovation in society *ultimately contributing to people's well-being*. Progress towards this impact will be monitored through proxy indicators set along the following four key impact pathways.

<b>Towards societal impact</b>	<b>Short-term</b>	<b>Medium-term</b>	<b>Longer-term</b>
<b>Addressing Horizon Europe objectives and EU policy priorities through R&amp;I</b>	<u>Outputs</u> - Number and share of outputs aimed at addressing specific <b>Horizon Europe objectives</b> and EU policy priorities,	<u>Solutions</u> - Number and share of innovations and scientific results addressing specific <b>Horizon Europe objectives</b> and EU policy priorities,	<u>Benefits</u> - Aggregated estimated effects from use of FP-funded results, on tackling specific <b>Horizon Europe objectives</b> and EU policy priorities, contribution to the policy and law-making cycle
<b>Delivering benefits and impact through R&amp;I missions <u>and Partnerships</u></b>	R&I mission outputs - Outputs in specific R&I missions <b>and Partnerships</b>	R&I mission results - Results in specific R&I missions <b>and Partnerships</b>	R&I mission targets met - Targets achieved in specific R&I missions <b>and Partnerships</b>
<b>Fulfilling EU's climate commitments</b>	<u>Projects and outputs</u> - Number and share of projects and outputs that are climate relevant (by relevant missions, partnerships and budget lines of the Programme)	<u>Innovations from climate relevant FP project</u> - Number of innovations from FP projects that are climate relevant, including from awarded IPRs	<u>Societal and Economic impact of climate relevant projects</u>  Aggregated estimated effects from use of FP-funded results, on delivering EU's long term climate and energy commitments under the Paris Agreement.  <u>Economic, societal and environmental costs and benefits of climate relevant projects</u>  - Uptake of innovative climate mitigation and adaptation solutions deriving from FP projects - Aggregated estimated effects from use of these solutions, on jobs and companies creation,

			<i>economic growth, clean energy, health and well-being (including air, soil and water quality)</i>
<b>Strengthening the uptake of <u>R&amp;I</u> in society, in MS</b>	<u>Co-creation</u> - Number and share of FP projects where EU citizens and end-users contribute to the co-creation of R&I content	<u>Engagement</u> - Number and share of FP beneficiary entities with citizen and end-users engagement mechanisms after FP project	<u>Societal R&amp;I uptake</u> <u>Access</u> , uptake and outreach of FP scientific results and innovative solutions.

### Economic/innovation impact pathway indicators

The Programme is expected to have economic/innovation impact especially within the Union by influencing the creation and growth of companies, especially SMEs, creating direct and indirect jobs *especially within the Union*, and by leveraging investments for research and innovation. Progress towards this impact will be monitored through proxy indicators set along the following three key impact pathways.

<b>Towards economic / innovation impact</b>	<b>Short-term</b>	<b>Medium-term</b>	<b>Longer-term</b>
<b>Generating innovation-based growth in the Union</b>	<u>Innovative outputs</u> - Number of innovative products, processes or methods from FP (by type of innovation) & Intellectual Property Rights (IPR) applications <i>in all participating countries</i>	<u>Innovations</u> - Number of innovations from FP projects (by type of innovation <i>and by country</i> ) including from awarded IPRs <u>SMEs</u> <i>SMEs introducing product or process innovations thanks to FP funding as % of FP-funded SMEs</i> <u>Norms and standards</u> <i>Number of norms and standards resulting from FP projects developed within the EU</i>	<u>Economic growth</u> - Creation, growth & market shares of companies having developed FP innovations <i>within and outside the Union</i>
<i>Adressing the Union gap between R&amp;D activities and the market</i>	<u>Exploitation of RDI results</u> <i>Share of FP results leading to commercial exploitation within or outside the Union, depending on the sector concerned</i> <u>Analysis of exploitation within or outside the Union</u> <i>Reasons of (former) FP participants to exploit R&amp;D outside of the Union</i>		
<b>Creating more and better jobs</b>	<u>Supported employment</u> - <i>For each participating country</i> , number of FTE jobs created, and jobs maintained in beneficiary entities for the FP project (by type of job)	<u>Sustained employment</u> - <i>For each participating country</i> , increase of FTE jobs in beneficiary entities following FP project (by type of job)	<u>Total employment</u> - Number of direct & indirect jobs created or maintained <i>or transfered in the Union</i> due to diffusion of FP results (by type of job) <i>- Number of direct and indirect jobs created in knowledge-intensive sectors per participating country</i>

<b>Leveraging investments in R&amp;I</b>	<u>Co-investment</u> - Amount of public & private investment mobilised with the initial FP investment	<u>Scaling-up</u> - Amount of public & private investment mobilised to exploit or scale-up FP results	<u>Contribution to '3% target'</u> - EU progress towards 3% GDP target due to FP

***Impact pathway indicators for the European Research Area***

<b>Towards impact for the ERA</b>	<b>Short-term</b>	<b>Medium-term</b>	<b>Longer-term</b>
<i>Attracting and retaining talents in the Union</i>	<u>FP-funded mobility</u> <i>Incoming and outgoing mobilities or researchers and innovators, within and outside the Union, per country</i>	<u>FP funded internationalisation</u> <i>- evolution and share foreign researchers and innovators based in all ERA countries</i> <i>- Evolution of connectivity and networking activities of research institutions, including public-private connections</i>	<u>Attractive R&amp;I systems</u> <i>- Foreign investments in innovative activities in the Union</i> <i>- Number of patents in participating countries</i> <i>- Licences revenues from abroad</i>
<u>Spreading</u> excellence and widening participation	<u>Participation in FP</u> <i>- Share of coordinators and participants from widening countries per part of the Programme and per instruments;</i> <i>- Share of evaluators and governance boards' members including from widening countries and low-performing R&amp;I regions</i>	<u>Creation and modernisation of pockets of excellence</u> <i>Excellent R&amp;I ecosystems, -including low-performing R&amp;I regions becoming hubs and drivers of change within their own country</i>	
<i>R&amp;I divide</i>	<u>Geographical concentration</u> <i>- Success rates</i> <i>- Utilisation of EU-funded research infrastructures in all ERA countries</i>	<u>Strategic planning of EU funding programmes</u> <i>Synergies and interactions between FP and Smart Specialisation Strategies</i>	<u>Enhancing national R&amp;I systems</u> <i>- Increase of high-quality and independent competitive research funding and career evaluation systems</i> <i>- Increase in private and in national <u>public</u> spending for R&amp;I</i>

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<sup>i</sup> *These could include topics such as Artificial Intelligence, Quantum technologies, Biocontrol or Second generation digital twins, or any other topics identified in the context of the Horizon Europe Strategic programming (including with Member States' networked programmes).*