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2025/0229 (NLE)

Proposal for a

COUNCIL REGULATION

on amending Council Regulation (EU) 2021/1173 of 13 July 2021 on establishing the European High Performance Computing Joint Undertaking and repealing Regulation (EU) 2018/1488

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE PROPOSAL

• Reasons for and objectives of the proposal

Council Regulation (EU) 2021/1173¹ repealing Council Regulation (EU) 2018/1488² establishes the European High Performance Computing Joint Undertaking and sets out its mission and objectives. The Joint Undertaking's mission is to develop, deploy, extend and maintain in the Union a world-leading federated, secure and hyper-connected supercomputing, quantum computing, service and data infrastructure ecosystem; to support the development and uptake of demand-oriented and user-driven innovative and competitive supercomputing systems based on a supply chain that will ensure the availability components, technologies and knowledge and limit the risk of disruption, and the development of a wide range of applications optimised for these systems; and, to widen the use of this supercomputing and quantum computing infrastructure to a large number of public and private users, and support the twin transition and the development of key skills for European science and industry.

Since 2021, when the Council Regulation (EU) 2021/1173 was adopted, the field of artificial intelligence (AI) has seen enormous technical progress and became a key strategic and highly competitive domain globally. In particular, large AI general purpose models have emerged as vital drivers of economic competitiveness and innovation. They have become pivotal in enhancing productivity across diverse sectors and transform entire value chains, thus dictating future economic value capture. The next generation of frontier AI models are expected to unlock a leap in capabilities, towards Artificial General Intelligence (AGI) capable of tackling highly complex and diverse tasks, matching human capabilities. Regions capable of developing and implementing these AI models at scale will lead in global innovation and attract premier talent. At the same time, sectors at the forefront of science and industry, such as biotechnology, climate, automotive AI, and aerospace, demand substantial computing resources to undertake major AI-driven scientific discoveries and industrial innovations.

Following the adoption of the AI Innovation Package in February 2024³, Regulation (EU) 2021/1173 was amended in June 2024 creating a new pillar of activities for the EuroHPC Joint Undertaking, enabling it to acquire, upgrade and operate AI factories.

The most advanced of these AI Factories in Europe will be equipped with supercomputers featuring up to 25,000 advanced AI processors, allowing only to develop middle-range AI models. Significant investments are therefore needed to scale up Europe's computing capacities to the next level.

On 9 April 2025, the Commission launched the AI Continent Action Plan⁴⁵ to position

¹ Council Regulation (EU)2021/1173 of 13 July 2021 on establishing the European High Performance Computing Joint Undertaking and repealing Regulation (EU) 2018/1488 (OJ L 256 19.7.21 p. 3).

² Council Regulation (EU) 2018/1488 of 28 September 2018 establishing the European High Performance Computing Joint Undertaking (OJ L 252, 8.10.2018, p. 1).

³ <https://digital-strategy.ec.europa.eu/en/news/commission-launches-ai-innovation-package-support-artificial-intelligence-startups-and-smes>

⁴ Communication from the Commission to the European Parliament, the Council, the European economic and social Committee and the Committee of the regions, AI Continent Action Plan, COM/2025/165 final

Europe as a global leader in AI. A core pillar of this strategy is boosting the Europe-wide infrastructure for training advanced AI models taking the 2024 AI Factories concept up to the next level.

The development of the next generation of frontier AI models is expected to require large-scale facilities, exceeding at least by three to four times the number of the most advanced AI processors available in the most powerful AI Factories, while taking into account power capacity, as well as energy, water efficiency and circularity. They will be capable of developing, training, and deploying very large AI models and applications at an unprecedented scale (e.g., AI models in the order of hundreds of trillions of parameters).

AI Gigafactories will provide a world-class AI compute infrastructure for European researchers, entrepreneurs, the public sector and industries. They shall strengthen the European industry, enable the development of entirely new AI solutions and ensure the EU's competitiveness and sovereignty as an AI continent in line with the Competitiveness Compass⁶. The public interest in co-investing with industry players in AI Gigafactories lies in expanding and strengthening the European AI compute infrastructure so that the next generation of AI models and applications for scientific, public and industrial use can be developed, implemented and put into application in Europe. Just as the AI Factories, the AI Gigafactories will be open to researchers, stakeholders from the public sector, startups and industry across Member States, under specific access conditions.

The existing mechanisms within Regulation 2021/1173 are not fully equipped today to support the establishment of the AI Gigafactories. A targeted amendment is therefore necessary to provide the EuroHPC Joint Undertaking with the necessary legal basis to be able to meet the commitments regarding setting up of AI GigaFactories in Europe. The amendment will further specifically mandate the Joint Undertaking to perform activities for the implementation of AI GigaFactories while also accommodating for their specificities.

The amendment also provides an opportunity to introduce strategic provisions related to quantum technologies, in line with the European Quantum Strategy. Quantum technologies, comprising quantum computing, communication, sensing, and metrology are emerging as a strategic field for the Union, with the potential to reshape key industries and societal applications, and to have a large impact on the Union's industrial competitiveness and technological sovereignty. The Union has made substantial investments in this domain. There is a need now to further coordinate and implement a pan-European quantum research, innovation and industrialisation agenda that capitalises on existing strengths and aligns all efforts around shared priorities. It is becoming increasingly important for Europe to translate its scientific excellence and innovation potential into real market opportunities and thereby contribute to the objectives of the Competitiveness Compass.

This amendment reinforces the current mandate of the EuroHPC Joint Undertaking on quantum technologies to:

- Support the development of a full European quantum ecosystem, covering research, innovation, infrastructure deployment, skills, and industrial capabilities;
- Ensure synergies between quantum and classical HPC infrastructures, notably for hybrid systems, simulations, and co-development platforms;

⁵ [Council Regulation \(EU\) 2024/1732](#)

⁶ https://commission.europa.eu/topics/eu-competitiveness/competitiveness-compass_en

- Promote Europe's technological sovereignty, by reinforcing capabilities in quantum-enabling components and reducing dependencies in critical areas;

- **Consistency with existing policy provisions in the policy area**

The objective of this proposal is to widen the scope of Council Regulation 2024/1732 in order to enable the Union to respond to new technological developments and strategic imperatives, namely the significant scale-up of AI-optimised compute capacity in Europe, as well as to align Member States around shared priorities in quantum technologies by redressing the existing fragmentation of quantum programmes across countries in the Union.

- **Consistency with other Union policies**

This proposal is fully in line with other Union policies, especially those policies enacted under the Commission priority ‘A prosperous and competitive Europe’.

2. **LEGAL BASIS, SUBSIDIARITY AND PROPORTIONALITY**

- **Legal basis**

The legal basis of the Joint Undertaking is Article 187 and the first paragraph of Article 188 of the Treaty on the Functioning of the European Union.

- **Subsidiarity (for non-exclusive competence)**

The subsidiarity principle applies insofar as the proposal does not fall under the exclusive competence of the Union.

The Council Regulation (EU) 2021/1173 covers the subsidiarity principle as its objectives, namely the strengthening of research and innovation capabilities, the acquisition of supercomputers and quantum computers, and access to high performance computing, quantum computing and data infrastructure across the Union by means of a Joint Undertaking, cannot be sufficiently achieved by the Member States, but can rather, by reason of avoiding unnecessary duplication, retaining critical mass and ensuring that public financing is used in an optimal way, be better achieved at Union level.

To serve the ambitions of industrial leadership and of the AI Continent Action Plan, the Regulation establishing the Joint Undertaking requires a targeted amendment enabling the EuroHPC Joint Undertaking to accommodate the specificities of the AI Gigafactories and to implement the EU’s quantum strategy.

Due to the nature of quantum and AI and the magnitude of investments required for the AI Gigafactories and quantum technologies, to keep Europe’s edge in these critical technologies can only be achieved by common action at Union level.

- **Proportionality**

The proposed amendment complies with the principles of proportionality as set out in Article 5, paragraph 4 of the Treaty on the European Union.

- **Choice of the instrument**

The creation and operation of a Joint Undertaking in which the Union participates requires a Council Regulation, to which an amendment is now being proposed.

3. RESULTS OF EX-POST EVALUATIONS, STAKEHOLDER CONSULTATIONS AND IMPACT ASSESSMENTS

- **Ex-post evaluations/fitness checks of existing legislation**

This is an amendment to an existing Regulation. The proposed targeted amendment to the Council Regulation (EU) 2021/1173 is the only way to fulfil the political commitment announced by President von der Leyen at the AI Summit in February 2025 of setting up the AI GigaFactories, as well as the implementation of the EU's Quantum Strategy. No ex-post evaluation or impact assessment has been performed.

- **Stakeholder consultations**

Stakeholders have been extensively consulted for the purpose of the amendments regarding the AI Gigafactories:

- a debate with the EuroHPC Participating States in the EuroHPC Governing Board,
- structured discussions with key public and private players of relevance for the initiative, including government representatives, Union and international companies, and private as well as public funding institutions, such as the European Investment Bank Group,
- a Call for Expression of Interest (CfEI) running from 9 April until 20 June 2025. This call invited ideas from across Europe, helping to identify potential consortia and gather the insights needed to refine the framework for AI Gigafactory development.

Due to very targeted nature of the amendments to the Regulation, which already mandates the EuroHPC JU to act in the field of AI and quantum, there is no need to conduct an Impact Assessment.

For quantum technologies, the amendment reflects inputs gathered through the public call for evidence conducted as part of the preparation of the European Quantum Technologies Strategy.

This consultation, launched by the European Commission, gathered contributions from a broad spectrum of stakeholders, including research organisations, industry representatives, national authorities, and civil society, and highlighted the importance of coordinated Union action to support the development of a comprehensive quantum ecosystem. Key priorities identified include: long-term research investment, infrastructure development, skills and education, industrial deployment, and international collaboration.

Additional inputs were also received through the following two channels:

- A debate with representatives of the Quantum Technology Coordination (Expert) Group⁷ where all the Member States are participating;
- Intense interactions with expert working groups from all the Member States that were set up under the coordination of the Quantum Technology Coordination Group. The expert working groups issued a report⁸ presenting a set of shared strategic priorities and recommendations guiding the development of quantum technologies in Europe.

⁷ <https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3629>

⁸ <https://digital-strategy.ec.europa.eu/en/library/shaping-european-strategy-quantum-technology-main-orientations-and-recommendations>

These inputs have helped inform the inclusion of quantum technologies in this amendment, ensuring coherence with stakeholder expectations and with the broader strategic direction of the Union in digital technologies.

4. BUDGETARY IMPLICATIONS

Additional funds from Horizon Europe, Connecting Europe Facility, Digital Europe will be channelled to the EuroHPC JU to implement the AI Gigafactories and the Union quantum strategy.

5. OTHER ELEMENTS

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

The amendment to the Regulation enlarges its scope in order to expand the objective of the Joint Undertaking related to development and operation of AI Gigafactories in Europe that will be federated with the AI Factories.

The objective addresses the unique considerations and requirements associated with the establishment of such ultra-scale AI data and compute infrastructure facilities necessary for training and deploying very large AI models and applications in the Union. It should be clarified that the amendments introduce the inclusion of AI Gigafactories within the scope of the Regulation.

This amendment responds to the major technological developments in the field of AI that have taken place since the original Regulation came into force in 2021 and since the previous amendment in 2024.

These developments are reflected in the amended Articles of the Regulation. Article 2(3d) presents the definition of an AI Gigafactory.

Article 3(2)(h) presents its new objective to support the establishment of Artificial Intelligence Gigafactories, in support of the further development of a highly competitive and innovative Artificial Intelligence ecosystem in the Union.

Article 4(1)(i) defines the Joint Undertaking's new AI Gigafactory pillar of activity.

Articles 5 is amended to reflect the increase and use of the Union financial contribution.

Article 12b is introduced to govern the location of an AI Gigafactory, conditions for eligibility of the public-private consortia seeking to host AI Gigafactories, rules pertaining to the share and conditions of the Union and EuroHPC Participating States' funds contributing to the establishment of AI Gigafactories, evaluation criteria for the selection of AI Gigafactories, criteria for the public access time etc.

Article 16(1) is amended to allow the use of EuroHPC supercomputers for civilian and security applications.

The amendment will also take into account the implementation of the European quantum strategy by the EuroHPC Joint Undertaking.

A new definition is added (Article 2, point 19a) introducing the concept of a “national quantum Competence Centre”, understood as a legal entity or consortium established in a participating country, offering access to quantum technologies, tools, services, and infrastructures. These centres aim to support users from industry, academia, and public

administrations, and to promote skills development, training, networking, and outreach activities related to QT.

Article 3(1) is amended to present the Joint Undertaking's updated mission to support the development and uptake of demand-oriented and user-driven innovative and competitive supercomputing systems and quantum. Article 3(2)(fa) presents the Joint Undertaking's new objective to support state-of-the-art scientific and applied research and innovation in quantum technologies.

The amendment also adds a new point (j) to Article 4(1), establishing a Quantum Technologies Pillar that addresses the entire European quantum ecosystem, including quantum computing, simulation, communication, sensing, and metrology.

The scope of actions covers:

- Scientific research and technological innovation in quantum domains;
- Industrialisation and scale-up of quantum technologies, including support to startups and disruptive innovation;
- Development of a network of national quantum competence centres, uptake of quantum applications in strategic sectors, and standardisation;
- Skills development and mobility, fostering a strong and inclusive quantum workforce;
- International cooperation aligned with Union external policy.

To help the EuroHPC JU to implement the quantum strategy, article 4 of the annex introduces the notion of Quantum Strategy Advisory Group and article 14b of this same annex details the tasks expected by the Quantum Strategy Advisory Group.

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on amending Council Regulation (EU) 2021/1173 of 13 July 2021 on establishing the European High Performance Computing Joint Undertaking and repealing Regulation (EU) 2018/1488

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 187 and 188, first paragraph, thereof,

Having regard to the proposal from the European Commission,

Having regard to the opinion of the European Parliament⁹,

Having regard to the opinion of the European Economic and Social Committee¹⁰,

⁹ OJ C , , p. .

¹⁰ OJ C [...], [...], p. [...]

Whereas:

- (1) Regulation (EU) 2024/1689 of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) aims to improve the functioning of the internal market by laying down a uniform legal framework in particular for the development, marketing and use of artificial intelligence in conformity with Union values.
- (2) Since 2021, when the Council Regulation (EU) 2021/1173 was adopted, the field of artificial intelligence (AI) has seen enormous technical progress and become a highly strategic and contested domain globally. The European Union is at the forefront of efforts to support responsible innovation in AI, by guiding innovation, setting guardrails, and developing global governance.
- (3) Large AI general purpose models have emerged as vital drivers of economic competitiveness and innovation. They become pivotal in enhancing productivity across diverse sectors and transform entire value chains, thus dictating future economic value capture. The next generation of frontier AI models are expected to unlock a leap in capabilities, towards Artificial General Intelligence (AGI) capable of tackling highly complex and diverse tasks, matching human capabilities. Regions capable of developing and implementing these AI models at scale will lead in global innovation and attract premier talent. At the same time, sectors at the forefront of science and industry, such as biotechnology, climate, automotive, defence, space and aerospace, demand substantial computing resources to undertake major AI-driven scientific discoveries and industrial innovations. Synergies between these activities and those undertaken by other Union programmes, such as the EU Space Programme, will be exploited, with appropriate safeguards in place to protect the strategic interests of the Union and its Member States.
- (4) The most advanced AI Factories in Europe will be equipped with supercomputers featuring up to 25,000 advanced AI processors, allowing only to develop middle-range AI models. Significant investments are therefore needed to scale up Europe's computing capacities to the next level.
- (5) On 9 April 2025, the Commission launched the AI Continent Action Plan¹¹ to position the Union as a global leader in AI. A core pillar of this strategy is boosting the Europe-wide infrastructure for training advanced AI models taking the 2024 AI Factories concept up to the next level.
- (6) The development of the next generation of frontier AI models is expected to require large-scale facilities, exceeding at least by three to four times the number of the most advanced AI processors available in the most powerful AI Factories, while taking into account power capacity, as well as energy, water efficiency and circularity. The existing mechanisms within Regulation 2021/1173 are not equipped today to support the establishment and operation of the AI Gigafactories. A targeted amendment is therefore necessary to provide the European High Performance Computing Joint Undertaking (the 'Joint Undertaking') with the necessary legal basis to be able to meet the commitments regarding setting up and operation of AI Gigafactories in Europe.
- (7) Strengthening the scientific and technological bases of the Union is increasingly vital for its long-term competitiveness and strategic autonomy. Indeed, artificial intelligence

¹¹ <https://digital-strategy.ec.europa.eu/en/news/commission-sets-course-europes-ai-leadership-ambitious-ai-continent-action-plan>

has the potential of accelerating scientific discovery and enhancing research capabilities across all domains. It is therefore essential that AI private and public users, in particular SMEs and scale-ups, within the Union benefit from world-class supercomputing infrastructures in order to sustain and advance Europe's leadership in research and innovation.

- (8) The European Commission's Competitiveness Compass, adopted on 29 January 2025, identifies strategic technologies including quantum technologies and high-performance computing as essential pillars to ensure Europe's technological sovereignty, economic resilience, and global leadership. The Compass stresses the need for coordinated investments and ecosystem development across research, infrastructure, industry, and skills to strengthen the Union's competitiveness in these fields.
- (9) Complementing this, the European Quantum Strategy, which will be adopted in July 2025, sets out a comprehensive framework to accelerate quantum research, innovation, industrialisation, and deployment of quantum technologies and infrastructures. It aims to build a sustainable and competitive quantum ecosystem, covering computing, communication, sensing, and metrology, with a strong focus on skills development as well as on international cooperation.
- (10) In view of the policy importance of this initiative, the amounts initially allocated from Horizon Europe, Digital Europe Programme and the Connecting Europe Facility should be increased to allow the Union to reach its objective, subject to budgetary availability.
- (11) Given the rapid technological developments in the field and the adapting Union AI policy, possible significant additional Union financing for AI gigafactories could be required in the coming years. Considering this specific policy context, it should be possible to entrust to the Joint Undertaking additional Union funding going beyond the amounts set out in Article 5(1). Such additional contribution should be at least matched by the members of the Joint Undertaking other than the Union.
- (12) In order to accelerate the development of AI Gigafactories across the Union, Member States may decide to use their remaining allocations under the Recovery and Resilience Facility (RRF) to finance their national contributions to an AI Gigafactory. To this end, Member States should be permitted to provide contributions to the Joint Undertaking for the purpose of supporting AI Gigafactory projects.
- (13) Additional Union contributions to AI gigafactories from other programmes, not listed in Article 5(1), should also be possible, through the signature of specific ad hoc contribution agreements, subject to commensurate contribution by one or more members of the Joint Undertaking other than the Union. A clear description of the intended use of entrusted funds, as well as a timeline for implementation shall be included in the corresponding contribution agreements in accordance with the relevant Commission work programme.

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EU) No 2021/1173 is amended as follows:

- (1) Article 2 is amended as follows:

- (2) the following point (3c) is added:

(3c) ‘Artificial Intelligence Giga Factory’ or ‘AI Gigafactory’ means a state-of-the-art large-scale facility with sufficient capacity to handle the complete lifecycle – development, training, fine-tuning, and large-scale inference – of very large, AI models and applications, providing a supercomputing service infrastructure, which is composed of AI-optimised computing capacity, a supporting data centre infrastructure (including high-capacity storage and networking), dedicated secure cloud user access environments, and specialised secure AI-oriented support services for its advanced operations and is supported by an environmentally sustainable energy supply system.

- (3) the following point (3d) is added:

(3d) ‘Artificial Intelligence Giga Factory Consortium’ or ‘AI Gigafactory Consortium’ means an association of legal entities duly incorporated in the Union coming together in a consortium for the purpose of establishing and operating an AI Gigafactory and specifying the respective roles and responsibilities of these entities for the lifetime of the AI Gigafactory, or a new legal entity established for the purpose of establishing and operating an AI Gigafactory, that has a legal form recognised in any Member State. The AI Gigafactory Consortium shall be established for a minimum duration of five years. One or more of the private partners of such consortium may be participating in the Private Members of the Joint Undertaking.

- (4) the following point (3e) is added:

(3e) ‘AI Gigafactory Coordinator’ means a legal entity, duly incorporated in the Union and validly existing under the laws of a Member State of establishment, which is legally authorized to represent the AI Gigafactory Consortium and has the legal capacity and authority to enter into, execute, and perform the AI Gigafactory Hosting Agreement; the AI Gigafactory coordinator shall be headquartered in the Union and shall be under control, directly or indirectly, through ownership interest or via other means, as defined in the Chapter IV of Regulation (EU) No 2024/1624 and relevant Union competition law principles, of legal entities or natural persons established within the Union. The coordinator may also be an existing hosting entity representing a Participating State that is a Member State or a hosting consortium of Participating States.

- (5) the following point (3f) is added:

(3f) ‘AI Gigafactory Hosting Agreement’ means an administrative agreement between the Joint Undertaking and the AI Gigafactory Coordinator to host and operate an AI Gigafactory.

- (6) the following point (3g) is added:

(3g) ‘AI Gigafactory hosting entity’ means a legal entity which has been designated by the AI Gigafactory consortium to host and operate an AI Gigafactory and its services, and which is established in a Participating State that is a Member State.

- (7) the following point (3h) is added:

(3h) ‘Artificial Intelligence Gigafactory Cooperation Agreement’ is an agreement between the Joint Undertaking and a third country specifying access conditions to AI Gigafactories for the legal entities under control, directly or indirectly, through

ownership interest or via other means, of legal entities or natural persons established in that third country.

- (8) the following point (19a) is added:

(19a) 'national quantum Competence Centre' means a legal entity, or a consortium of legal entities, established in a Participating State, providing users from industry, including SMEs, academia, and public administrations with access on demand to quantum technologies, tools, applications and services, as well as to national or European quantum infrastructures, and offering expertise, skills, training, networking and outreach.

- (9) Article 3 is amended as follows:

- (10) paragraph 1 is replaced by the following:

The mission of the Joint Undertaking shall be to develop, deploy, extend and maintain in the Union a world-leading federated, secure and hyper-connected supercomputing, quantum computing, service and data infrastructure ecosystem. It shall also support the development and uptake of demand-oriented and user-driven innovative and competitive supercomputing systems and quantum technologies and systems based on a supply chain that will ensure components, technologies and knowledge limiting the risk of disruptions and the development of a wide range of applications optimised for these systems; and, to widen the use of that supercomputing infrastructure to a large number of public and private users and support the twin transition and the development of key skills for European science and industry.

- (11) The following point (fa) is added to paragraph 2:

(fa) to support state-of-the-art scientific and applied research and innovation in quantum technologies, their transition from the lab-to-the fab, and their deployment, uptake and integration in world-class quantum infrastructures, for building a dynamic, innovative and resilient quantum ecosystem across the EU, and for ensuring scientific and industrial leadership, competitiveness, strategic autonomy and technological sovereignty of the Union in quantum computing, communication and sensing.

- (12) Point (h) in paragraph 2 is replaced by the following:

(h) to develop and operate the Artificial Intelligence Factories, and to support the establishment of and access to Artificial Intelligence Gigafactories and their services, in support of the further development of a highly competitive and innovative Artificial Intelligence ecosystem in the Union.

- (13) Paragraph 3 is replaced by the following:

The Joint Undertaking shall contribute to safeguarding the interests of the Union when procuring supercomputers and supporting the development and uptake of High-Performance Computing and quantum technologies, systems and applications. It shall enable a co-design approach for the acquisition of world-class supercomputers, while safeguarding the security of the supply chain of procured technologies and systems. It shall contribute to the Union's strategic autonomy, support the development of technologies and applications reinforcing the European High-Performance Computing and Quantum Technologies supply chains and promote their integration in systems that address a large number of scientific, societal, environmental, industrial as well as security use needs.

- (14) Article 4 is amended as follows:
- (15) the following point (i) is added to paragraph 1:
- (i) AI Gigafactory pillar, covering activities of AI Gigafactories, which in their operation may be connected with the EuroHPC network of Artificial Intelligence Factories for ensuring seamless integration and knowledge sharing across the European Artificial Intelligence ecosystem; this pillar shall include the following activities:
 - (i) providing a world-class Artificial Intelligence compute infrastructure for European researchers, entrepreneurs, and industries,
 - (ii) enabling the development of new Artificial Intelligence solutions across all public and private sectors and
 - (iii) ensuring the Union's competitiveness and sovereignty as an Artificial Intelligence continent.
- (16) the following point (j) is added to paragraph 1:
- (j) Quantum technologies pillar, addressing the full quantum ecosystem and the application domains of quantum computing and simulation, quantum communication, and quantum sensing and metrology, ensuring the security and resilience of the quantum supply chain and its enabling technologies. Activities shall inter alia address:
 - (a) Scientific and Technological Research and Innovation: Advancing research excellence in quantum science and technology domains.
 - (b) Transition from the lab to the fab and ecosystem development: Supporting the development and deployment of state-of-the-art quantum infrastructures; fostering the industrialisation of quantum technologies by supporting the uptake of quantum applications in key public and industrial sectors, ensuring the translation of advances across all quantum domains into real-world applications, including the development of lead markets; promoting European and international standards; and, supporting the development and networking of national quantum competence centres across Europe.
 - (c) Skills and Talent: Developing a competitive and inclusive quantum research and engineering workforce through coordinated education, training and mobility initiatives, across key quantum-related disciplines and technical fields.
 - (d) International cooperation: Developing international collaboration in quantum technologies to solve global scientific and societal challenges, in line with the external policy objectives and international commitments of the Union.
- (17) Article 5 is amended as follows:
- (18) Paragraph 1 is replaced by the following:
- The Union financial contribution to the Joint Undertaking including EEA appropriations shall be up to EUR 3 972 300 000 including EUR 92 000 000 for administrative costs, on the condition that that amount is at least matched by the contribution of Participating States, distributed indicatively as follows:

- (a) up to EUR 1 660 000 000 from Horizon Europe
- (b) up to EUR 2 012 300 000 from the Digital Europe Programme
- (c) up to EUR 300 000 000 from the Connecting Europe Facility.

(19) A new subparagraph is added in Paragraph 1:

Additional funds from Horizon Europe, the Digital Europe Programme and the Connecting Europe Facility may complement the Union contribution referred to in the first sub-paragraph, on the condition that the additional amounts are at least matched by the contribution of one or more members of the Joint Undertaking other than the Union. Such additional Union contribution shall be dedicated exclusively to the pillar referred to in Article 4(1)(i). These additional funds shall not be accounted for in the calculation of the Union maximum financial contribution.

(20) Paragraph 3 is replaced by the following:

Additional funds from any Union programme other than and complementing the ones referred to in paragraph 1 of this Article may be allocated to the Joint Undertaking to support its pillars of activities referred to in Article 4, except those referred to in Article 4(1)(a). These additional funds shall not be accounted for in the calculation of the Union maximum financial contribution.

(21) A new paragraph 4a is added:

For the contributions entrusted to the Joint Undertaking in accordance with paragraph 3 and 4 of this Article, the requirements of Article 158 of Regulation (EU, Euratom) 2024/2509 are applicable. When these additional Union contributions are related to the pillar referred to in Article 4(1)(i), one or more of the members other than the Union shall make additional contributions commensurate to the amount of the Union contributions.

(22) Paragraph 6 is deleted.

(23) Paragraph 7 is deleted.

(24) Paragraph 8 is deleted.

(25) The following Article 12b is added:

‘Article 12b’

Artificial Intelligence Giga Factory

1. An AI Gigafactory shall be located in a Member State. It shall be financially supported by a partnership between the Union and one or more Participating States, represented through the Joint Undertaking, and an AI Gigafactory Consortium, which may include one or more technology infrastructure suppliers, legally represented by an AI Gigafactory Coordinator.
2. Participation in an AI Gigafactory Consortium of legal entities from non-Participating States may be subject to restrictions or exclusion where such participation is considered contrary to the Union's strategic assets, interests, autonomy or security. In accordance with Regulation (EU) 2021/695, Regulation (EU) 2021/694 and Regulation (EU) 2021/1153, the call for expression of interest for selecting an AI Gigafactory Consortium may limit participation in the said Consortium to legal entities established only in Participating States or to legal entities established in specified associated countries of the Horizon Europe Framework Programme, the Digital Europe Programme and any subsequent relevant

Union funding programme, or other third countries in addition to Participating States. The restrictions and exclusions referred to in this paragraph shall in principle not apply to legal entities established in third countries, which have signed an AI Gigafactory Cooperation Agreement or a similar agreement with the Union. The call for expression of interest for selecting an AI Gigafactory may specify that legal entities in other third countries may be eligible provided they comply with the requirements to be fulfilled by those legal entities to guarantee the protection of the security interests of the Union and the Member States and to ensure the protection of classified documents information. Those requirements shall be set out in the work programme.

3. The AI Gigafactory Consortium shall benefit from explicit provision of an appropriate supporting document proving the commitment of the Member State where the AI Gigafactory hosting entity is established, or of the competent authorities of the Participating States of the AI Gigafactory Consortium.
4. The Union financial contribution referred to in Article 5 shall cover up to 17% to the capital expenditure (CAPEX) investments of the overall compute infrastructure of the AI Gigafactory, or to a pre-agreed guaranteed purchase of access time to the AI Gigafactory equivalent to a leased capacity of the CAPEX. One or more Participating States should at least match the Union contribution. The remaining investment as well as the operational expenditure (OPEX) of the AI Gigafactory shall be covered by the AI Gigafactory Consortium.
5. A selected AI Factory may substantially scale up to become an AI Gigafactory. In such case, the Union's financial support already provided for this AI Factory shall be counted as part of the Union's contribution towards the CAPEX of the AI Gigafactory computing infrastructure. The Artificial Intelligence Factory hosting agreement referred to in Article 10 shall be modified accordingly, where appropriate. The additional investment into the Artificial Intelligence Factory concerned to become an AI Gigafactory as well as the operational expenditure (OPEX) of the AI Gigafactory shall be covered by the AI Gigafactory Consortium.
6. Participating States that are Member States may, by mutual agreement with the Joint Undertaking, channel their respective voluntary contributions, including those referred to in paragraph 4 of this Article and any other in addition to them, in total or in part, for a specific AI Gigafactory through the Joint Undertaking, which shall then manage and disburse these funds to the designated AI Gigafactory on their behalf.
7. The Joint Undertaking shall own the part of the AI Gigafactory compute infrastructure corresponding to the Union contribution specified in paragraphs 4 and 5. The duration of this ownership or of the leased capacity referred to in paragraph 4 shall be at least five years from the start of operations of the AI Gigafactory and further specified in the AI Gigafactory Hosting Agreement. This duration shall be extended in case of a substantial upgrade of the AI Gigafactory compute infrastructure. Without prejudice to the winding up of the Joint Undertaking, as referred to in Article 23(4) of the Statutes, this ownership shall be transferred in accordance with the AI Gigafactory Hosting Agreement or be extended for an agreed period under conditions specified in the AI Gigafactory Hosting Agreement. In the case of transfer of ownership to the AI Gigafactory consortium, the residual value of the AI Gigafactory compute infrastructure shall be converted into equivalent access rights for the Union. If there is no transfer of ownership to the AI Gigafactory consortium according to the Hosting Agreement, but a decision for

decommissioning, the relevant costs shall be borne by the AI Gigafactory Consortium.

8. The access rights of the Union and the Participating States in AI Gigafactory shall be directly proportional to their respective financial contributions to the CAPEX of the computing infrastructure of the AI Gigafactory, or to the pre-agreed guaranteed purchase of access time to the AI Gigafactory.
9. The Governing Board of the Joint Undertaking shall determine:
 - (a) the conditions of the Union's access time to the AI Gigafactories,
 - (b) specific rules for access conditions to AI Gigafactories that concern the allocation of access time for projects and activities considered as strategic for the Union.
10. When determining the conditions of the Union's access time pursuant to paragraph 9, the Governing Board shall ensure that access shall:
 - (a) be granted to users residing, established or located in a Member State or in a third country associated to the Digital Europe Programme, to Horizon Europe or to the Connecting Europe Facility;
 - (b) be free of charge for the users from entities governed by public law. It shall also be free of charge for industrial users for applications related to research and innovation activities funded by Horizon Europe, the Digital Europe Programme, or the Connecting Europe Facility as well as those awarded a Seal of Excellence under Horizon Europe or the Digital Europe Programme and for private innovation activities of SMEs and scale-ups;
 - (c) include reserved compute resources specifically for EU-funded research projects, ensuring guaranteed availability and scheduling priority.
11. The Governing Board shall monitor the share of the Union's access time for the different types of users, defined in point (a) of paragraph 10. In case where there is a significant imbalance in shares of access time between the different types of users versus demand, it shall take appropriate corrective action to address this imbalance.
12. Contributions from the Union or the Participating States shall be subject to conditions ensuring the protection of the Union's strategic interests. The specific conditions referred to in this paragraph shall be laid down in a dedicated AI Gigafactory Hosting Agreement between the Joint Undertaking and the AI Gigafactory consortium. The AI Gigafactory Hosting Agreement shall be governed by Union law, supplemented, for any matter not covered by this Regulation or by other Union legal acts, by the law of the Member State where the hosting entity is established. The AI Gigafactory Hosting Agreement shall:
 - (a) set out in detail the ownership and governance structure of the AI Gigafactory;
 - (b) include provisions ensuring an effective scrutiny and control of the AI Gigafactory by the Union for safeguarding the Union's strategic assets, interests, autonomy or security;
 - (c) specify the financial contributions of the Union, of the Participating States and the public and/or private partners of the AI Gigafactory Consortium including the guaranteed access time to the AI Gigafactory referred to in paragraph 8, as appropriate, and its duration;

- (d) specify, if appropriate, any other Union's interests resulting from any Union investments regulated by specific investment agreements between the AI Gigafactory consortium and InvestEU;
 - (e) set out the eligibility conditions for the non-Union users of an AI Gigafactory; these shall comply with the same conditions as the eligibility conditions specified in paragraph 2;
 - (f) set out the detailed conditions for access for the Union users and the accounting modalities of the access times to the AI Gigafactory services;
 - (g) the quality of service offered to the Joint Undertaking users when operating the AI Gigafactory, as set out in the service level agreement included in the AI Gigafactory Hosting Agreement;
 - (h) set out the modalities of acquisition, operation and use of the AI Gigafactory data and compute infrastructure, including the user requirements from the public sector, where appropriate; where the AI Gigafactory Consortium includes one or more technology infrastructure suppliers, the AI Gigafactory Hosting Agreement shall include the provision of enhanced conflict-of-interest safeguards concerning these suppliers;
 - (i) the conditions for the transfer of ownership referred to in paragraph 7, where appropriate;
 - (j) detail the extension of ownership or of the pre-agreed guaranteed purchased access time, as appropriate, and the phasing out conditions for the AI Gigafactory, where appropriate;
 - (k) the liability conditions for operating the AI Gigafactory, where appropriate;
 - (l) the obligation of the AI Gigafactory hosting entity to submit by 31 January of each year to the Governing Board an audit report and data on the use of the Union access time in the previous financial year;
 - (m) contain an arbitration clause, within the meaning of Article 272 TFEU, granting jurisdiction over all matters covered by the hosting agreement to the Court of Justice of the European Union.
13. The AI Gigafactory shall include a public governance body composed of representatives from the Commission and the Participating States providing public funding to the specific AI Gigafactory. Without prejudice to the AI Gigafactory consortium's management and operational autonomy, and to ensure alignment with the public interest objectives underpinning the public funding, the following elements shall require explicit prior approval from the designated public governance body:
- (a) Any proposed access agreements with entities from third countries that may raise concerns regarding the Union's strategic assets, interests, autonomy or security;
 - (b) Substantial changes to the legal and financial structure or control impacting the Union's interests or those of the Participating States, such as a change in the ultimate ownership or control of the AI Gigafactory, any relocation of critical assets outside the Union or major financial restructuring decisions;
 - (c) Significant change in the strategic purpose of the AI Gigafactories.

14. Following a call for expression of interest, the AI Gigafactory Consortium shall be selected by the Governing Board of the Joint Undertaking through a fair and transparent process, with the support of a panel of independent experts and of an accredited financial institution appointed by the Governing Board for the evaluation, based, inter alia, on the following criteria:
- (a) Technical evaluation:
 - (1) Objectives and technical quality of the proposal
 - (2) Quality of the workplan
 - (3) Quality of the physical, IT and networking infrastructure
 - (4) Sustainability and energy efficiency
 - (5) Consortium experience and know-how in setting up similar large-scale facilities.
 - (b) Potential Impact:
 - (1) Quality of service, including security and trustworthiness
 - (2) Impact on the European AI ecosystem
 - (3) EU added value.
 - (c) Financial Feasibility:
 - (1) Investment commitments of the Participating States and of the AI Gigafactory Consortium
 - (2) Quality and financial viability of the proposed business model (including a due diligence to be carried out by the appointed accredited financial institution).
15. Where the Consortium does not include one or more technology infrastructure suppliers, the suppliers of the AI Gigafactory shall be selected by the AI Gigafactory Consortium based on fair and transparent tender specifications that shall take into account general system specifications, and in particular the user requirements from the public sector, provided by the Union in the call for expression of interest and further specified in the AI Gigafactory Hosting Agreement. The selection shall be based on fair, open and transparent criteria, and shall also ensure EU added value and address the security and resilience of the supply chain. The selected tenderers shall comply with the eligibility conditions specified in paragraph 2.
16. The Joint Undertaking may establish framework contracts for the provision of essential and high-demand components, such as advanced AI processors. The AI Gigafactory Consortia may use the framework contracts referred to in this paragraph for their procurement.
- (26) Article 16 is amended as follows:
- (27) Paragraph 1 is replaced by the following:
- Without prejudice to Article 17(9), the use of EuroHPC supercomputers shall be open to users from the public and private sectors applications. Except for the industrial-grade EuroHPC supercomputers, their use shall be primarily for research and innovation purposes falling under public funding programmes, for public sector applications and for private innovation activities of SMEs, where appropriate.

Annex

The Annex is amended as follows:

(28) Article 3 of the Annex is amended as follows:

(29) Paragraph 2 is amended:

Any application of a Member State or a third country associated to Horizon Europe or the Digital Europe Programme for membership of the Joint Undertaking shall be addressed to the Governing Board. The candidate countries shall provide a written acceptance of these Statutes, and of any other provisions governing the functioning of the Joint Undertaking. The candidates shall also provide their motivation for requesting membership to the Joint Undertaking and indicate how their national supercomputing or quantum technology strategy is aligned with the Joint Undertaking's objectives. The Governing Board shall assess the application, taking into account the relevance and the potential added value of the candidate as regards the achievement of the mission and objectives of the Joint Undertaking and may decide to ask for clarifications regarding the candidature before endorsing the application.

(30) Article 4 of the Annex is amended as follows:

(31) the following point (d) is added in paragraph 1:

(d) the Quantum Strategy Advisory Group.

(32) Article 5 of the Annex is amended as follows:

(33) the following paragraph 3 is added:

(3) For the quantum pillar of activities, the Participating States shall appoint a representative from their competent authorities in the field of quantum technologies.

(34) Article 6 of the Annex is amended as follows:

(35) the following paragraph 5a is added:

(5a) For the tasks referred to in Article 7(4a) of these Statutes, and for each AI Gigafactory, the voting rights of the Participating States shall be distributed in proportion to their committed financial contributions and to their in-kind contributions to that AI Gigafactory until the end of the AI Gigafactory hosting agreement; the in-kind contributions shall only be taken into account if they have been certified *ex-ante* by an independent expert or auditor.

For the purpose of this paragraph, decisions of the Governing Board shall be taken by a majority of at least 75 % of all votes, including the votes of the members who are absent.

(36) the following paragraph 6 is amended:

(6) For the tasks referred to in Article 7(5), 7(5a), 7(6) and 7(7) of these Statutes, decisions of the Governing Board shall be taken in two stages.

- (37) Article 7 of the Annex is amended as follows:
- (38) the following paragraph 4a is added:
- (4a) The Governing Board shall carry out the following tasks related to the AI Gigafactories referred to in Article 12b of this Regulation:
- (a) discuss and adopt the part of the multiannual strategic programme that is related to the establishment of AI Gigafactories referred to in Article 18(1) of these Statutes;
 - (b) discuss and adopt the part of the annual work programme that is related to the establishment of AI Gigafactories and the selection of AI Gigafactory Consortia and the corresponding expenditure estimates;
 - (c) approve the launch of calls for expression of interest, in accordance with the annual work programme;
 - (d) approve the selection of the AI Gigafactory Consortia which will establish and operate the AI Gigafactories;
 - (e) determine the conditions of the Union's access time to the AI Gigafactories
 - (f) approve any tenders related to the establishment of an AI Gigafactory selected for funding;
 - (g) approve framework contracts established by the EuroHPC Joint Undertaking for the provision of essential and high-demand components of AI Gigafactories.
- (39) the following paragraph 5a is added:
- (5a) For the Quantum Pillar of activities, the provisions of Article 7(5) of these Statutes apply, with the exception of activities related to the acquisition and operation of quantum computers where the provisions of Article 7(4) of these Statutes apply.
- (40) Article 10 of the Annex is amended as follows:
- (41) paragraph 1 is amended as follows:
- The Industrial and Scientific Advisory Board shall be composed of a Research and Innovation Advisory Group, an Infrastructure Advisory Group and a Quantum Strategy Advisory Group.
- (42) the following paragraph 7 is added:
- (7) The Quantum Strategy Advisory Group shall consist of no more than twelve members, of which up to six shall be appointed by the Private Members taking into

account their commitments to the Joint Undertaking and up to six shall be appointed by the Governing Board, in accordance with Article 7(3)(k) of these Statutes.

(43) The following Article 12a is added:

Article 12a

Functioning of the Quantum Strategy Advisory Group

1. The Quantum Strategy Advisory Group shall meet at least twice a year.
2. The Quantum Strategy Advisory Group may appoint working groups where necessary under the overall coordination of one or more members.
3. The Quantum Strategy Advisory Group shall elect its chair.
4. The Quantum Strategy Advisory Group shall adopt its rules of procedure, including the nomination of the constituent entities that shall represent the Advisory Group and the duration of their nomination.

(44) The following Article 14a is added:

Article 14a

Tasks of the Quantum Strategy Advisory Group

1. The Quantum Strategy Advisory Group shall:
 - (a) draw up its contribution to the draft multiannual strategic programme in relation to quantum technologies activities referred to in Article 20 of these Statutes and review it regularly in accordance with the evolution of scientific, industrial, and policy demand;
 - (b) organise public consultations open to all public and private stakeholders having an interest in the field of quantum technologies to inform them about, and collect feedback on, the draft multiannual strategic programme and the related draft activities of the quantum technologies work programme for a given year.
 - (c) The contribution to the draft multiannual strategic programme referred to in paragraph 1 shall address:
 - (d) the strategic research, innovation, deployment, and infrastructure priorities for the development and uptake of quantum technologies and their integration into the European digital ecosystem, to support the Union's resilience, technological sovereignty, and strategic autonomy while taking into account the dual-use potential of such technologies;
 - (e) potential international cooperation activities in quantum technologies that add value and are of mutual interest while ensuring alignment with Union values and security interests
 - (f) training, education, and workforce development priorities for addressing key competences and the skills gap in quantum technologies, including awareness of security-sensitive applications
 - (g) the acquisition, deployment, and operation of quantum infrastructures, including the interconnection and federation with High Performance Computing infrastructures and other digital infrastructures such as quantum communications and quantum sensing;

- (h) measures for capability building, interoperability, standardisation, security in the field of quantum technologies with specific consideration of dual-use risks and protection of the strategic assets, interests, autonomy or security of the Union.

(45) Article 16 of the Annex is amended as follows:

Budgetary commitments of the Joint undertaking may be divided into annual instalments. From January 2025, at least 20 % of the cumulative budget of the residual years shall not be covered by annual instalments.

Article 40

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

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

<i>For the European Parliament</i>	<i>For the Council</i>
<i>The President</i>	<i>The President</i>

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1. FRAMEWORK OF THE PROPOSAL/INITIATIVE

1.1. Title of the proposal/initiative

Amendment of the Council Regulation on establishing the European High Performance Computing Joint Undertaking

1.2. Policy area(s) concerned

Research and Innovation & European Strategic Investments

A Europe fit for the Digital Age

(Advanced Computing - Horizon Europe Cluster 4, Digital, Industry and Space
High Performance Computing – DEP Strategic Objective 1 – Connecting Europe
Facility - Digital)

1.3. Objective(s)

1.3.1. General objective(s)

To boost the available supercomputing capacity in support of the objectives of the AI Continent Action Plan by enabling the establishment and deployment of AI Gigafactories across the EU.

To allow implementing the EU quantum strategy vision to transform Europe into a quantum industrial powerhouse and a global market leader in quantum technologies, while maintaining its scientific leadership.

1.3.2. Specific objective(s)

Specific objective No 1

To enable the establishment of ultra-scale AI compute infrastructure facilities (AI Gigafactories), including the required data storage infrastructure facilities, capable of supporting the development, training, and deployment of very large AI models and applications at an unprecedented scale (e.g., AI models in the order of hundreds of trillions of parameters).

To deliver massive computing power for AI workloads, far surpassing that of the largest existing EuroHPC AI Factory supercomputers, through the integration of energy-efficient data centres, high-speed network connectivity, and resilient energy infrastructure essential for operating AI Gigafactories.

Specific objective No 2

To strengthen capabilities across the entire quantum value chain (components, devices, and systems) and quantum infrastructure capacities and address fragmentation between current European and national initiatives to reinforce Europe's quantum technological sovereignty and economic security.

1.3.3. Expected result(s) and impact

Specify the effects which the proposal/initiative should have on the beneficiaries/groups targeted.

AI Gigafactories will provide the missing native world-class AI data and compute infrastructure for European innovators (startups, scaleups, industry), researchers and stakeholders from the public sector. They will strengthen the competitiveness and innovation capacity of the European industry, by enabling the development of advanced large-scale AI models and solutions for many different industrial use cases

and application sectors. These AI Gigafactories will lay the foundation for truly sovereign European AI, empowering the development of advanced models trained on European data, governed by EU laws, and built within a trusted, secure, and ethical framework that embodies European values.

A more integrated European approach covering all quantum technologies will strengthen Europe's global competitiveness and technological sovereignty, secure its leadership in quantum technologies, help strengthen and further develop a thriving European quantum startup ecosystem to scaleup and enhance its capacity to compete internationally and set international standards.

1.3.4. *Indicators of performance*

Specify the indicators for monitoring progress and achievements.

- The number of AI Gigafactories deployed [by 2027].
- Deployment of quantum computers demonstrating quantum advantage deployed by 2030, marking a key milestone in Europe's technological sovereignty.
- The number of jobs that will be created in the quantum technologies sector by 2030, supporting the development of a strong and competitive European ecosystem.
- The number of quantum solutions that will be deployed in different applications and use cases by 2030, with a clear impact orientation across basic and applied science, industry, and the public sector.

1.4. **The proposal/initiative relates to:**

- ☐ a new action
- ☐ a new action following a pilot project / preparatory action¹²
- ☒ the extension of an existing action
- ☐ a merger or redirection of one or more actions towards another/a new action

1.5. **Grounds for the proposal/initiative**

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

The Commission launched a non-binding call for expressions of interest for AI Gigafactories on 9 April 2025, with a submission deadline of 20 June (see https://eurohpc-ju.europa.eu/document/download/47492db7-592e-4ad8-b672-9c822f94afa0_en?filename=AI%20GIGAFATORIES%20CONSULTATION.pdf). The call aims to gather ideas from across Europe, identify potential consortia, and inform the development of a robust AI Gigafactory framework. After the deadline, the Commission will initiate structured discussions with selected proponents and their supporting Member States to help mature their proposals. The target is to launch the official call on AI Gigafactories under the EuroHPC Joint Undertaking before end 2025. Therefore the amended Regulation should be in force by then to enable the launch of the call.

¹²

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

To initiate the implementation of the **quantum Europe strategy**, the Commission will launch the first targeted actions in the quantum domain in the short term. These initial steps will set the foundation and create momentum for the broader deployment of the strategy. The scope and scale of activities will then be progressively expanded and intensified in alignment with the anticipated adoption, in 2026, of the Quantum Act, ensuring full compliance and maximising opportunities once the Act is in force.

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

Reasons for action at EU level (ex-ante)

The AI Gigafactory initiative is a natural candidate for coordinated European action, aligning with the EuroHPC JU strategy and leveraging the most suitable EU legal instruments for implementation. Due to the magnitude of the initiative, on the scale of three to five billion euros per individual AI Gigafactory, only by acting at the EU level can Europe pool resources, expertise, and funding to generate the critical mass required for acquiring next-generation AI data and compute infrastructure. This level of ambition cannot be achieved through fragmented national efforts alone. The AI Gigafactory framework provides a unique opportunity to consolidate Europe's strategic capabilities in AI, energy-efficient infrastructure, and sovereign AI development, ensuring that Europe remains competitive and at the forefront of global AI innovation.

Concerning quantum technologies, Europe is currently at a critical juncture in the global quantum technology race: The EU and the Member States have demonstrated strong political commitment, most recently through the 2023 European Declaration on Quantum Technologies and benefit from world-class scientific excellence. However, the research landscape in Europe is fragmented, with the Union and several Member States having their own, uncoordinated research programmes. In addition, the European quantum ecosystem remains fragile and highly fragmented. It is dominated by small startups and scale-ups that face significant barriers to growth, as they lack stable revenue streams, struggle to access capital, and must navigate a limited industrial demand. Many risk vanishing or relocating to more supportive ecosystems outside Europe. A cooperation framework between the EU and the Member States is needed to ensure a coherent and effective coordination across quantum research and innovation national and European activities, industrial ecosystem and infrastructure development or skills.

Expected generated EU added value (ex-post)

AI Gigafactories:

- Enhanced coordination and pooling of large scale European, national and industrial investments in deploying AI Gigafactories for European researchers, entrepreneurs, industries, and the public sector that is unattainable by individual Member States and European companies to propel the EU to the AI forefront globally.

- Improved access for European industrial innovators (startups, scaleups and large industry), public sector stakeholders and researchers to world-class AI data and compute infrastructure resources for stimulating the development in Europe of state of the art, ultra large-scale AI models and AI solutions tailored to the needs of different industrial sectors, public authorities and scientific disciplines.
- Support the EU's AI industrial and research ecosystem by bringing together key AI data and compute infrastructure resources they need to develop ultra large scale generative trustworthy AI models and applications.
- Strengthening the innovation potential and productivity of the European industry, by enabling the development of entirely new AI solutions for a wide range of use cases and industrial application sectors, thus ensuring the EU's competitiveness and sovereignty as an AI continent.

Quantum Technologies:

- Coordinated efforts in quantum technologies at EU level, in partnership with Member States, to accelerate the further development and deployment of quantum technologies, avoiding duplication and fragmentation.
- Alignment and pooling of EU, national, and industrial investments in quantum technologies.
- Provision of state-of-the-art quantum computing, sensing and communication infrastructures that would be unattainable by individual Member States and companies, reinforcing Europe's strategic autonomy.
- Creation of a coherent and resilient European quantum ecosystem, integrating supply chains, standardisation activities, and quantum-ready skills development.
- Increased access for European researchers, start-ups, and industries to advanced quantum infrastructures and testbeds, supporting innovation and competitiveness.
- Strengthened global positioning of the EU in key areas such as quantum computing, quantum communication, and quantum sensing, aligned with long-term EU strategic goals.

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

- The AI Factories initiative launched in 2024, which required targeted amendments to the EuroHPC Joint Undertaking Regulation Nr 2021/1173, amended by the Regulation (EU) 2024/1732, has been a huge success, demonstrating the strong commitment and support of Member States. Several key lessons learned can be leveraged to ensure continued progress and impact:
- Reinforce the strategic significance of AI Gigafactories by highlighting their potential to drive EU-wide innovation, as demonstrated by the AI Factories initiative.
- Build on the strong commitment and support from Member States, as seen in the AI Factories initiative, to ensure success in the AI Gigafactories initiative.
- Utilise the momentum from the AI Factories to attract and secure significant funding, engaging public and private sectors.

- Capitalise on the interest from technology firms, data centre integrators, energy providers, and major investment funds to integrate public-private partnerships, boosting resources and innovation.

Drawing on lessons from past EuroHPC JU and Quantum integration, several key takeaways can guide the successful implementation of the AI Gigafactories and Quantum Technologies framework:

- Avoid fragmentation by establishing a coherent governance and investment structure that enables coordinated action between the EU and Member States, ensuring a unified approach to quantum-HPC development.
- Facilitate joint procurement mechanisms to pool resources and accelerate the deployment of world-class quantum infrastructure, while maximising efficiency and return on investment across Europe.
- Incentivise the uptake of EU-developed quantum technologies by aligning industrial policy tools, legal frameworks, and funding instruments to create a favourable environment for domestic innovation, scaling, and market adoption.
- Support the development of a secure and competitive European quantum-HPC ecosystem through strategic coordination across research, infrastructure, and industrial actors, ensuring long-term resilience and technological sovereignty.

1.5.4. Compatibility with the multiannual financial framework and possible synergies with other appropriate instruments

There are clear complementarities and synergies with Horizon Europe clusters and missions, including synergies with big data, robotics, and AI, as well as the Chips Joint Undertaking, which together support Europe's technological sovereignty. EuroHPC JU also supports cross-cutting initiatives such as e-Health and the Digital Twin of the Human Body, where advanced computing power is essential.

In parallel, links with the Destination Earth (DestinE), and synergies in the Digital Europe Programme (DEP) – particularly in areas such as AI, cybersecurity, and advanced digital skills – further reinforce the added value of EuroHPC's integrated role.

The use of AI Gigafactories for developing AI for space and dual-use applications and the dual use character of quantum technologies means that respective breakthroughs can also benefit strategic European space, security and defence applications that are under development by the different European and national space, security and defence programmes.

Through coordinated implementation and alignment with these initiatives and programmes, the enhanced EuroHPC Joint Undertaking can play a central role in amplifying Europe's digital capabilities, ensuring coherence, impact, and sustainability across the EU's research and innovation landscape.

1.5.5. Assessment of the different available financing options, including scope for redeployment

The management of the action areas proposed for EuroHPC Joint Undertaking aligns well with its existing mandate and operational scope. While these areas may require specific expertise or new assignments, the Joint Undertaking has the capacity to absorb them through efficient reallocation of resources and strategic alignment of ongoing activities. The EuroHPC Joint Undertaking is already effectively

implementing the European HPC strategy, including the deployment of high-performance and quantum computing and AI infrastructures (such as AI Factories), R&D initiatives, and connectivity-related actions. Its strong performance in these areas has delivered valuable insights, which have directly informed the preparation of this Regulation. This track record demonstrates that the EuroHPC Joint Undertaking is well positioned to take on an expanded role in support of Europe's AI Gigafactories and quantum technology ambitions.

1.6. Duration of the proposal/initiative and of its financial impact

☒ limited duration

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

☐ unlimited duration

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

1.7. Method(s) of budget implementation planned¹³

☐ Direct management by the Commission

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

☐ Shared management with the Member States

☒ Indirect management by entrusting budget implementation tasks to:

- ☐ third countries or the bodies they have designated
- ☐ international organisations and their agencies (to be specified)
- ☐ the European Investment Bank and the European Investment Fund
- ☒ bodies referred to in Articles 70 and 71 of the Financial Regulation
- ☐ public law bodies
- ☐ bodies governed by private law with a public service mission to the extent that they are provided with adequate financial guarantees
- ☐ bodies governed by the private law of a Member State that are entrusted with the implementation of a public-private partnership and that are provided with adequate financial guarantees
- ☐ bodies or persons entrusted with the implementation of specific actions in the common foreign and security policy pursuant to Title V of the Treaty on European Union, and identified in the relevant basic act
- ☐ bodies established in a Member State, governed by the private law of a Member State or Union law and eligible to be entrusted, in accordance with

¹³ Details of budget implementation methods and references to the Financial Regulation may be found on the BUDGpedia site: <https://myintracomm.ec.europa.eu/corp/budget/financial-rules/budget-implementation/Pages/implementation-methods.aspx>.

sector-specific rules, with the implementation of Union funds or budgetary guarantees, to the extent that such bodies are controlled by public law bodies or by bodies governed by private law with a public service mission, and are provided with adequate financial guarantees in the form of joint and several liability by the controlling bodies or equivalent financial guarantees and which may be, for each action, limited to the maximum amount of the Union support.

Comments

N/A

2. MANAGEMENT MEASURES

2.1. Monitoring and reporting rules

The activities of the EuroHPC Joint Undertaking are subject to continuous monitoring and periodic reviews in accordance with its financial rules, to ensure both the highest impact and excellence, as well as the most efficient use of resources. The outcomes of monitoring and periodic reviews shall feed into the evaluations of the Joint Undertaking as part of Horizon Europe evaluations as specified in Article 47 of Regulation establishing Horizon Europe.

In addition, the Commission will undertake a final evaluation with the assistance of independent experts to examine how the Joint Undertaking fulfils its mission according to its economic, technological, scientific, societal and policy objectives, and evaluate the effectiveness, efficiency, relevance, coherence, and Union added value of its activities as part of Horizon Europe. The evaluation will assess its synergies and complementarities with relevant European, national and, where relevant, regional initiatives, including synergies with other parts of Horizon Europe (such as missions, clusters or thematic/specific programmes). Impacts achieved at Union and national level, taking into account the component of synergies and policy retrofitting will be given particular attention.

2.2. Management and control system(s)

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

The Commission's internal auditor shall exercise the same powers over the Joint Undertaking as those exercised in respect of the Commission. Moreover, the Governing Board may arrange, as appropriate, for the establishment of an internal audit capability of the Joint Undertaking.

In compliance with Article 157 of Regulation (EU, Euratom) No 2024/2509, the Joint Undertaking will respect the principles of sound financial management, transparency and non-discrimination and will guarantee a level of protection of the financial interests of its members equivalent to that required under that Regulation.

Ex-post audits of expenditure on indirect actions will be carried out in compliance with the Horizon Europe, Digital Europe and Connecting Europe Framework Programme.

In order to protect the financial interests of the Union, the Commission will in compliance with the Financial Regulation supervise the activities of the EuroHPC Joint Undertaking, in particular by carrying out audits and evaluations on the programme implementation, apply procedures for the examination and acceptance of the accounts and exclude from Union financing expenditure disbursements which have been made in breach of the applicable rules. It may also suspend and interrupt payments if it detects financial or administrative irregularities.

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

The main risks identified so far are i) the low contribution of Participating States to the budget, ii) in-kind contribution by private members (IKOP) to meet their minimum contribution target.

i) In 2024, EuroHPC Joint Undertaking significantly improved the execution of its administrative budget, reaching 95% in commitments and 80% in payments—an improvement expected to address past audit findings. While operational payments also increased substantially (from 19% to 59%), commitment execution declined (from 83% to 72%), meaning audit concerns may persist for the operational budget. This was mainly due to the impact of the amended Regulation (EU) 2024/1732, which required a reprioritisation of the 2024 Work Programme to accommodate the new AI initiative. As a result, funding sources were reassessed, unused credits reallocated, and some planned activities postponed to 2025–2027.

ii) The European Court of Auditors (ECA) continues to reference the European Parliament's concerns about consistently lower-than-targeted IKOP contributions. Due to the 50/50 co-funding requirement between EU and national public funds – not private members – the current IKOP model cannot realistically meet the EUR 900 million target set in the 2021 Regulation. As a result, both the Parliament and ECA have called on the Commission to reassess the feasibility of these targets. While this structural funding issue is beyond the Joint Undertaking's mandate, the Joint Undertaking remains committed to supporting the Commission and has engaged an external consultant to improve IKOP monitoring and reporting within existing constraints.

It is to be noted that the large private investments expected to take place for the deployment of AI Gigafactories (of the order of several billions of Euros) will drastically improve the current IKOP model and are expected to overcome by far the set target of EUR 900 million. To a large extent, the same private investment logic will apply to the further development of quantum technologies under the Joint Undertaking's responsibility.

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

As part of the Joint Undertakings created under Horizon Europe, the EuroHPC Joint Undertaking will be part of the audit strategy of the Commission. In particular, the indirect actions implemented by the Joint Undertaking will be monitored by the CIC to ensure an error rate at the same level as the other actions funded under Horizon Europe.

2.3. Measures to prevent fraud and irregularities

The Commission or its representatives and the Court of Auditors have the power of audit, on the basis of documents and on-the-spot, over all grant beneficiaries, contractors and subcontractors who receive EU funds. The EuroHPC has been subject of regular ECA audits

The European Anti-fraud Office (OLAF) and the European Public Prosecutor's Office (EPPO) may also carry out investigations, including on-the-spot checks and inspections in accordance with the provisions and procedures laid down in Council Regulation (Euratom, EC) No 2185/96¹⁴ and Regulation (EC, Euratom) No 883/2013

¹⁴ Council Regulation (Euratom, EC) No 2185/96 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities' financial interests against fraud and other irregularities (OJ L 292, 15.11.1996, p. 2).

of the European Parliament and of the Council¹⁵, with a view to establishing whether there has been fraud, corruption or any other illegal activity affecting the financial interests of the European Union in connection with a grant agreement or a contract concerning EU funding.

Without prejudice to the above, grant agreements and contracts resulting from the implementation of this Regulation shall expressly empower the Commission, the Court of Auditors and OLAF to conduct such audits, on-the-spot checks and inspections.

¹⁵ Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council of 11 September 2013 concerning investigations conducted by the European Anti-Fraud Office (OLAF) and repealing Regulation (EC) No 1073/1999 of the European Parliament and of the Council and Council Regulation (Euratom) No 1074/1999 (OJ L 248, 18.9.2013, p. 1).

3. ESTIMATED FINANCIAL IMPACT OF THE PROPOSAL/INITIATIVE

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

- Existing budget lines

In order of multiannual financial framework headings and budget lines.

Heading of multiannual financial framework	Budget line	Type of expenditure	Contribution			
	Heading 1 Single Market, Innovation and Digital	Diff./Non-diff. ¹⁶	from EFTA countries ¹⁷	from candidate countries and potential candidates ¹⁸	From other third countries	other assigned revenue
	01 02 02 42 01 – HE - Cluster Digital, Industry and Space — High-Performance Computing Joint Undertaking (EuroHPC) Support expenditure	Diff.	YES	YES	YES	YES
	01 02 02 42 02 – HE - Cluster Digital, Industry and Space — High-Performance Computing Joint Undertaking (EuroHPC) Operational expenditure	Diff.	YES	YES	YES	YES
	02 04 02 11 01 – DEP - High-Performance Computing Joint Undertaking (EuroHPC) Support expenditure	Diff.	YES	YES	YES	YES
	02 04 02 11 02 – DEP - High-Performance Computing Joint Undertaking (EuroHPC) Support expenditure	Diff.	YES	YES	YES	YES
	02 03 03 – CEF Digital	Diff.	NO	YES	YES	YES

¹⁶ Diff. = Differentiated appropriations / Non-diff. = Non-differentiated appropriations.

¹⁷ EFTA: European Free Trade Association.

¹⁸ Candidate countries and, where applicable, potential candidates from the Western Balkans.

3.2. Estimated financial impact of the proposal on appropriations

3.2.1. Summary of estimated impact on operational appropriations

- ☐ The proposal/initiative does not require the use of operational appropriations
- ☒ The proposal/initiative requires the use of operational appropriations, as explained below

3.2.1.1. Appropriations from voted budget and including EFTA appropriations

EUR million (to three decimal places)

Heading of multiannual financial framework	1	1 - Single Market, Innovation and Digital
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The proposal will not increase the total level of expenditure programmed under Heading 1 of the Multiannual Financial Framework 2021-2027. Indeed, the additional Union contribution, including EFTA to the EuroHPC JU will be pooled from the Horizon Europe Programme, the Digital Europe Programme and the Connecting Europe Facility - Digital Programme (CEF – Digital).

This additional contribution will be financed by:

- i. an internal redeployment of the current envelope of the Digital Europe Programme,
- ii. an internal redeployment of the current envelope of the Horizon Europe Programme,
- iii. an internal redeployment of the current envelope of the Connecting Europe Facility – Digital Programme,

The summary tables below provides a full overview of all sources of funding.

EUR million (to three decimal places)

Operational appropriations reallocated within Digital Europe			2025	2026	2027	TOTAL
02 04 01 11 - Digital Europe programme – Cybersecurity Competenc Centre	Commitments	(1a)	15,000	16,000		31,000
TOTAL appropriations reallocated within Digital Europe	Commitments	=1a	15,000	16,000		31,000

Operational appropriations reallocated within CEF – Digital			2025	2026	2027	TOTAL
02 03 03 01 – CEF Digital	Commitments	(1a)	100,000			100,000
TOTAL appropriations reallocated within CEF- Digital	Commitments	=1a	100,000			100,000

Operational appropriations reallocated within Horizon Europe			2025	2026	2027	TOTAL
01 02 01 03 – Research Infrastructures	Commitments	(1a)		100,000		100,000
01 02 02 10 – Cluster Health	Commitments	(1a)		19,685	24,029	43,714
01 02 02 11.02 - Innovative Health Initiative Joint Undertaking - operational budget	Commitments	(1a)		6,145	4,194	10,339
01 02 02 12.02-Global Health EDCTP3 Joint Undertaking - operational budget	Commitments	(1a)		4,538	2,275	6,813
01 02 02 20- Cluster Culture, Creativity and Inclusive Society	Commitments	(1a)		10,276	9,823	20,099
01 02 02 30-Cluster Civil Security for Society	Commitments	(1a)		23,758	3,452	27,210
01 02 02 40 - Cluster Digital, Industry and Space	Commitments	(1a)		282,614	22,457	305,071
01 02 02 42.02 - CHIPS Joint Undertaking	Commitments	(1a)		10,494	9,997	20,490
01 02 02 43.02 -Smart Networks and Services Joint Undertaking - operational budget	Commitments	(1a)		3,950	3,868	7,818

01 02 02 50-Cluster Climate, Energy and Mobility	Commitments	(1a)		53,784	46,433	100,217
01 02 02 51.02- Single European Sky ATM Research 3 Joint Undertaking – operational budget	Commitments	(1a)		2,842	3,136	5,978
01 02 02 52.02-Clean Aviation Joint Undertaking - operational budget	Commitments	(1a)		3,853	11,773	15,626
01 02 02 53.02-Europe's Rail Joint Undertaking - operational budget	Commitments	(1a)		2,404	1,728	4,131
01 02 02 54.02-Clean Hydrogen Joint Undertaking - operational budget	Commitments	(1a)		4,016	4,561	8,578
01 02 02 60- Cluster Food, Bioeconomy, Natural Resources, Agriculture and Environment	Commitments	(1a)		37,152	37,478	74,629
01.020261.02-Circular Bio-based Europe Joint Undertaking - operational budget	Commitments	(1a)		4,488	4,797	9,286
TOTAL appropriations reallocated within Horizon Europe	Commitments	=1a		570,000	190,000	760,000

EU contribution to the EuroHPC Joint Undertaking

EUR million (to three decimal places)

Joint Undertaking			2025	2026	2027	Post 2027	TOTAL
Title 3	Commitments	(3a)	115,000	586,000	190,000		891,000
	Payments	(3b)			210,000	681,000	891,000
TOTAL additional appropriations for Joint Undertaking	Commitments	=1+1 a +3a	115,000	586,000	190,000		891,000
	Payments	=2+2 a+3b			210,000	681,000	891,000

EUR million (to three decimal places)

Joint Undertaking		2021	2022	2023	2024	2025	2026	2027	Post 2027	TOTAL
Human Resources ^[1]		-	1,486	4,721	6,695	6,829	6,966	42,425		69,122
Other administrative expenditure		-	2,031	1,713	1,747	1,782	1,818	13,786		22,878
TOTAL DG	Appropriations		3,517	6,434	8,443	8,612	8,784	56,211		92,000

^[1] Covering the administration of HE and DEP actions. The FTE costs are determined on the basis of the average yearly cost of TA (EUR 152 000) and CA (EUR 82 000) staff.

Heading of multiannual financial framework	7	‘Administrative expenditure’ ¹⁹
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§EUR million (to three decimal places)

DG CNECT 10 FTE STATUTORY AD, 2 FTE AC)		2021	2022	2023	2024	2025	2026	2027	Post 2027	TOTAL
Human resources [1]		0,772	0,787	0,803	0,819	0,836	2,082	2,082	6,246	14,427
Other administrative expenditure		p.m	p.m	p.m	p.m	p.m	p.m	p.m	p.m	p.m
TOTAL appropriations under HEADING 7 of the multiannual financial framework	(Total commitments = Total payments)	0,772	0,787	0,803	0,819	0,836	2,082	2,082	6,246	14,427

3.2.2. Estimated output funded from operational appropriations (not to be completed for decentralised agencies)

Commitment appropriations in EUR million (to three decimal places)

Indicate objectives and outputs ↓			Year 2024		Year 2025		Year 2026		Year 2027		Enter as many years as necessary to show the duration of the impact (see Section1.6)								TOTAL	
	OUTPUTS																			
	Type ²⁰	Average cost	No	Cost	No	Cost	No	Cost	No	Cost	No	Cost	No	Cost	No	Cost	Total No	Total cost		
SPECIFIC OBJECTIVE No 1 ²¹ ...																				

¹⁹ The necessary appropriations should be determined using the annual average cost figures available on the appropriate BUDGpedia webpage.

²⁰ Outputs are products and services to be supplied (e.g. number of student exchanges financed, number of km of roads built, etc.).

²¹ As described in Section 1.3.2. ‘Specific objective(s)’

- Output																	
- Output																	
- Output																	
Subtotal for specific objective No 1																	
SPECIFIC OBJECTIVE No 2 ...																	
- Output																	
Subtotal for specific objective No 2																	
TOTALS																	

3.2.3. Summary of estimated impact on administrative appropriations

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

3.2.3.1. Appropriations from voted budget

VOTED APPROPRIATIONS	Year	Year	Year	Year	TOTAL 2021 - 2027
	2024	2025	2026	2027	
HEADING 7					
Human resources	0.819	0.836	2.082	2.082	5.819
Other administrative expenditure	0.000	0.000	0.000	0.000	0.000
Subtotal HEADING 7	0.000	0.000	0.000	0.000	0.000
Outside HEADING 7					
Human resources	0.000	0.000	0.000	0.000	0.000
Other expenditure of an administrative nature	0.000	0.000	0.000	0.000	0.000
Subtotal outside HEADING 7	0.000	0.000	0.000	0.000	0.000
TOTAL	0.819	0.836	2.082	2.082	5.819

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

3.2.4. Estimated requirements of human resources

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

3.2.4.1. Estimated impact on Commission human resources - Financed from voted budget

Estimate expressed in full-time equivalent units (FTEs)²²

VOTED APPROPRIATIONS		Year 2024	Year 2025	Year 2026	Year 2027
• Establishment plan posts (officials and temporary staff)					
20 01 02 01 (Headquarters and Commission's Representation Offices)		4	4	10	10
20 01 02 03 (EU Delegations)		0	0	0	0
01 01 01 01 (Indirect research)		0	0	0	0
01 01 01 11 (Direct research)		0	0	0	0
Other budget lines (specify)		0	0	0	0
• External staff (inFTEs)					
20 02 01 (AC, END from the 'global envelope')		2	2	2	2
20 02 03 (AC, AL, END and JPD in the EU Delegations)		0	0	0	0
Admin. Support line [XX.01.YY.YY]	- at Headquarters	0	0	0	0
	- in EU Delegations	0	0	0	0
01 01 01 02 (AC, END - Indirect research)		0	0	0	0
01 01 01 12 (AC, END - Direct research)		0	0	0	0
Other budget lines (specify) - Heading 7		0	0	0	0
Other budget lines (specify) - Outside Heading 7		0	0	0	0
TOTAL		6	6	12	12

Considering the overall strained situation in Heading 7, in terms of both staffing and the level of appropriations, the human resources required will be met by staff from the DG who are already assigned to the management of the action and/or have been redeployed within the DG or other Commission services.

²²

Please specify below the table how many FTEs within the number indicated are already assigned to the management of the action and/or can be redeployed within your DG and what are your net needs.

The staff required to implement the proposal (in FTEs):

	To be covered by current staff available in the Commission services	Exceptional additional staff*		
		To be financed under Heading 7 or Research	To be financed from BA line	To be financed from fees
Establishment plan posts	10		N/A	
External staff (CA, SNEs, INT)	2			

Description of tasks to be carried out by:

Officials and temporary staff	
External staff	

3.2.4.2. Estimated impact on JU's human resources - Financed from voted budget

There is no additional requirements in terms of human resources in the JU. Below it is included only for reference the requirements in human resources mentioned in the previous LFS.

	Year 2025	Year 2026	Year 2027	Post 2027	TOTAL
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Officials (AD Grades)					
Officials (AST grades)					
Contract staff	27	27	27	27	27
Temporary staff	27	27	27	27	27
Seconded National Experts					

TOTAL	54	54	54	54	54
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	Year 2025	Year 2026	Year 2027	Post 2027	TOTAL
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Officials (AD Grades)					
Officials (AST					

grades)					
Contract staff	2,303	2,350	2,397	24,914	36,129
Temporary staff	4,744	4,839	4,936	10,678	34,358
Seconded National Experts					
TOTAL	7,048	7,189	7,332	35,592	70,487

3.2.5. Overview of estimated impact on digital technology-related investments

Compulsory: the best estimate of the digital technology-related investments entailed by the proposal/initiative should be included in the table below.

Exceptionally, when required for the implementation of the proposal/initiative, the appropriations under Heading 7 should be presented in the designated line.

The appropriations under Headings 1-6 should be reflected as “Policy IT expenditure on operational programmes”. This expenditure refers to the operational budget to be used to re-use/ buy/ develop IT platforms/ tools directly linked to the implementation of the initiative and their associated investments (e.g. licences, studies, data storage etc). The information provided in this table should be consistent with details presented under Section 4 “Digital dimensions”.

TOTAL Digital and IT appropriations	Year 2024	Year 2025	Year 2026	Year 2027	TOTAL MFF 2021 - 2027
HEADING 7					
IT expenditure (corporate)	0.000	0.000	0.000	0.000	0.000
Subtotal HEADING 7	0.000	0.000	0.000	0.000	0.000
Outside HEADING 7					
Policy IT expenditure on operational programmes	0.000	0.000	0.000	0.000	0.000
Subtotal outside HEADING 7	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	0.000	0.000	0.000	0.000

3.2.6. Compatibility with the current multiannual financial framework

The proposal/initiative:

- ☒ can be fully financed through redeployment within the relevant heading of the Multiannual Financial Framework (MFF).

EUR million (to three decimal places)

From line		Amount (EUR million)	To Line
01 02 01 03	Research infrastructures	100,000	01 02 02 41
01 02 02 10	Cluster Health	43,714	01 02 02 41
01 02 02 11.02	Innovative Health Initiative Joint Undertaking - operational budget	10,339	01 02 02 41
01 02 02 12.02	Global Health EDCTP3 Joint Undertaking - operational budget	6,813	01 02 02 41
01 02 02 20	Cluster Culture, Creativity and Inclusive Society	20,099	01 02 02 41
01 02 02 30	Cluster Civil Security for Society	27,210	01 02 02 41
01 02 02 40	Cluster Digital, Industry and Space	305,071	01 02 02 41
01 02 02 42.02	CHIPS Joint Undertaking	20,491	01 02 02 41
01 02 02 43.02	Smart Networks and Services Joint Undertaking - operational budget	7,818	01 02 02 41
01 02 02 50	Cluster Climate, Energy and Mobility	100,217	01 02 02 41
01 02 02 51.02	Single European Sky ATM Research 3 Joint Undertaking - operational budget	5,978	01 02 02 41
01 02 02 52.02	Clean Aviation Joint Undertaking - operational budget	15,626	01 02 02 41
01 02 02 53.02	Europe's Rail Joint Undertaking - operational budget	4,131	01 02 02 41
01 02 02 54.02	Clean Hydrogen Joint Undertaking - operational budget	8,578	01 02 02 41
01 02 02 60	Cluster Food, Bioeconomy, Natural Resources, Agriculture and Environment	74,629	01 02 02 41
01.020261.02	Circular Bio-based Europe Joint Undertaking - operational budget	9,286	01 02 02 41
<i>Subtotal HE</i>	<i>Horizon Europe Programme</i>	<i>760,000</i>	
02 03 03 01	Connecting Europe Facility (CEF) — Digital	100,000	02 03 03 02
<i>Subtotal CEF</i>	<i>Connecting Europe Facility (CEF)</i>	<i>100,000</i>	
02 04 01 11	Digital Europe programme - European Cybersecurity Competence Centre	31,000	02 04 02 11
<i>Subtotal DEP</i>	<i>Digital Europe programme</i>	<i>31,000</i>	
	Total	891,000	

3.2.7. Third-party contributions

The proposal/initiative:

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

Participating States are expected to contribute an amount that is at least matching the Union contribution referred to in Article 5(1), first sub-paragraph.

3.3. Estimated impact on revenue

- ☒ The proposal/initiative has no financial impact on revenue.
- ☐ The proposal/initiative has the following financial impact:
 - ☐ on own resources
 - ☐ on other revenue
 - ☐ please indicate, if the revenue is assigned to expenditure lines

EUR million (to three decimal places)

Budget revenue line:	Appropriations available for the current financial year	Impact of the proposal/initiative ²³			
		Year 2024	Year 2025	Year 2026	Year 2027
Article					

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

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

4. DIGITAL DIMENSIONS

4.1. Requirements of digital relevance

4.2. Data

4.3. Digital solutions

4.4. Interoperability assessment

²³

As regards traditional own resources (customs duties, sugar levies), the amounts indicated must be net amounts, i.e. gross amounts after deduction of 20% for collection costs.

4.5. Measures to support digital implementation

N/A
