



Brussels, 18.9.2020
COM(2020) 569 final

2020/0260 (NLE)

Proposal for a

COUNCIL REGULATION

on establishing the European High Performance Computing Joint Undertaking

{SWD(2020) 179 final}

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE PROPOSAL

• Reasons for and objectives of the proposal

High Performance Computing (HPC), which refers to computing systems (“supercomputers”) with extremely high computational power that are able to solve hugely complex and demanding problems, is a critical capability for the digital transformation of our society. It is the “engine” that powers the data economy, with the potential to enable key technologies like artificial intelligence (AI), data analytics and cybersecurity to exploit the enormous potential of big data.

HPC is enabling many industrial sectors to innovate and to move up into higher value products and services, paving the way for the development of novel industrial applications in combination with other advanced digital technologies. HPC applications and infrastructures are essential in nearly every field of research, from fundamental physics to biomedicine, in order to achieve deeper scientific understanding and breakthroughs. HPC is also an essential tool for researchers and policy-makers to address major societal challenges, from climate change, smart and green development, and sustainable agriculture to personalised medicine and crisis management. A highly pertinent example is the COVID-19 pandemic, where HPC is being used, often in combination with AI, to accelerate the discovery of new drugs, predict the virus’ spread, plan and distribute scarce medical resources, and anticipate the effectiveness of containment measures and post-epidemic scenarios.

In the next few years, Europe’s leading role in the data economy, its scientific excellence, and its industrial competitiveness will increasingly depend on its capability to develop key HPC technologies, provide access to world-class supercomputing and data infrastructures, and maintain its present excellence in HPC applications. To make this happen, a pan-European strategic approach is essential.

The EuroHPC Joint Undertaking was established¹ in October 2018 as a legal and financial framework, pooling resources from the EU, 32 countries, and two Private Members: the European Technology Platform for HPC (ETP4HPC) and the Big Data Value (BDVA) Associations. So far, the Joint Undertaking has used funds from the 2014-2020 Multiannual Financial Framework (MFF) for its strategic investments. After 20 months of operation, it has substantially increased overall investment in HPC at European level and has started to deliver on its mission to restore Europe’s position as a leading HPC power. By the end of 2020, it will deploy a world-class supercomputing and data infrastructure accessible to public and private users all over Europe. Its investments are also supporting HPC Competence Centres throughout Europe, which ensure that HPC is widely available in the Union and provide specific services and resources for industrial innovation (including SMEs) and the development of HPC skills, and research and innovation in critical HPC hardware and software technologies and applications. This will increase the EU’s ability to produce innovative HPC technology.

The Council Regulation establishing the EuroHPC Joint Undertaking in 2018 set a target of reaching the next supercomputing frontier, exascale performance,² i.e. computing systems

¹ Council Regulation (EU) 2018/1488 establishing the European High Performance Computing Joint Undertaking

² See preamble, section 12. ‘The Joint Undertaking should be set up and start operating at the latest by early 2019 to reach the target of equipping the Union with a pre-exascale infrastructure by 2020, and to develop the necessary technologies and applications for reaching exascale capabilities around 2023 to 2025.’

capable of executing more than one trillion (10^{18}) operations per second, by the years 2022 to 2023. This increase of computing power would also come from the deployment of quantum computers and from moving to post-exascale technologies.

The proposed Regulation is in essence a continuation of the existing initiative established under Council Regulation (EU) 2018/1488, introducing modifications to adapt the Regulation to the next multiannual financial framework (MFF) Programmes, but also to reflect the priorities of the Commission, and to make it possible for the Joint Undertaking to use funding from the new MFF programmes for 2021-2027. These programmes are Horizon Europe, the Digital Europe Programme and the Connecting Europe Facility. This funding will be essential for Europe to reach this next supercomputing frontier of exascale computing. It will allow the Union to equip itself with a world-class federated, secure and hyper-connected supercomputing and quantum computing service and data infrastructure, and to develop the necessary technologies, applications and skills for reaching exascale capabilities, which is currently foreseen around 2023-2025 and post-exascale around 2025-2027, while promoting a world-class European HPC and quantum computing innovation ecosystem.

As the main drivers and objectives of the EuroHPC Joint Undertaking have remained unchanged since its establishment, the Impact Assessment published in January 2018,³ remains valid. In addition, the Impact Assessment accompanying the proposal for a Regulation of the European Parliament and of the Council establishing the Digital Europe programme for the period 2021-2027 took HPC objectives into account.⁴

Accordingly, the Commission's proposal for a new EuroHPC Regulation is accompanied by a Staff Working Document (SWD), which summarises the evidence collected since 2018. The SWD analyses the evolution of key socio-economic and technological drivers and of user requirements affecting the future evolution of HPC and data infrastructures, technologies and applications in the EU and worldwide, taking into account the EU's political priorities for 2020-2025. It presents the latest HPC market figures and provides an overview of the main lessons learnt from the Joint Undertaking's activities so far. It describes the role HPC will play in the near future for the digital transformation of Europe, and the creation of a single European data space. Finally, it provides evidence of the importance of the EuroHPC Joint Undertaking's activities, and of the impact that its continuation will have on an increasing number of critical technologies and applications in the next decade, notably for European excellence in low-power processor technologies and in AI.

How will the EuroHPC Joint Undertaking operate?

The mission of the proposed EuroHPC Joint Undertaking is an evolution of the mission of the EuroHPC Joint Undertaking established in October 2018. The long-term objectives in essence are not modified, i.e. the deployment and operation of a world-class High Performance Computing and data infrastructure, and the development and promotion of an excellent European HPC ecosystem. The emphasis is on reaching the exascale era and broadening to new High Performance Computing approaches based on quantum technologies.

The activities of the proposed Joint Undertaking are grouped around five main pillars:

- (a) *Infrastructure*: The pillar will continue focusing on the acquisition of world class supercomputing infrastructure. However, its activities have been expanded to include not only the acquisition, deployment, and operation of a world-class supercomputing infrastructure but also that of a quantum computing infrastructure.

³ SWD(2018) 6 final

⁴ COM(2018) 434 final, SEC(2018) 289 final, SWD(2018) 306 final

- (b) *Federation of supercomputing services*: This is a new pillar. It will cover activities to provide Union-wide, cloud-based access to federated, secure supercomputing, quantum computing and data resources and services throughout Europe for public and private users. The pillar will include support for the interconnection of the High Performance Computing, quantum computing and data resources. Their interconnection with the Union's common European data spaces and federated cloud infrastructures and, the development, acquisition and operation of a platform for the seamless federation and secure, cloud-based service provisioning of a supercomputing and quantum computing service and data infrastructure.
- (c) *Technology*: This pillar will continue supporting an ambitious research and innovation agenda for developing a world-class and innovative supercomputing ecosystem. The pillar will support hardware and software technologies, and their integration into computing systems, covering the whole scientific and industrial value chain. In addition, it will support the technologies and systems required for the interconnection and operation of classical supercomputing systems with other, often complementary computing technologies, in particular neuromorphic or quantum computing.
- (d) *Application*: This pillar was part of the technology pillar of the EuroHPC Joint Undertaking established in October 2018. However, it is now singled out to recognize its accrued importance, notably the extension to applications of industrial relevance. This pillar will support activities to achieve excellence and maintain Europe's present leading position in key computing and data applications and codes for science, industry (including SMEs) and the public sector, including support for Centres of Excellence in HPC applications.
- (e) *Widening usage and skills*: This pillar was previously part of the technology pillar of the EuroHPC Joint Undertaking established in October 2018, mainly addressing the creation and networking of national HPC Competence Centres. However, it is now singled out to recognize its accrued importance, in particular with the participation in the Digital Skills priority of the Digital Europe Programme. This pillar will focus on activities to foster excellence in supercomputing, quantum computing, and data use and skills. It will aim to widen the scientific and industrial use of supercomputing resources and data applications, and foster industrial access and use of supercomputing and data infrastructures for innovation adapted to industrial needs; and, to provide Europe with a knowledgeable leading scientific community and a skilled workforce.

The membership of the proposed Joint Undertaking is as follow:

- **public members**: the Union (represented by the Commission) and the Member States and countries associated to Horizon Europe, the Digital Europe Programme and the Connecting Europe Facility wishing to participate (Participating States).⁵ Other Member States and Associated Countries remain free to join.
- **private members**: these remain the same to the ones of the Council Regulation (EU) 2018/1488 – the ETP4HPC and the BDVA industrial associations.

⁵ Participating States in the current setting of the EuroHPC Joint Undertaking are: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Montenegro, the Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Turkey.

The governance and the allocation of the voting rights of the proposed Joint Undertaking remain identical to the ones defined in the Council Regulation (EU) 2018/1488.

The EuroHPC Joint Undertaking will continue to implement the HPC strategic roadmap as defined by the multiannual strategic research and innovation agendas developed by the EuroHPC Research and Innovation Advisory Group⁶ (RIAG) and the EuroHPC Infrastructure Advisory Group⁷ (INFRAG), complemented by the Strategic Research Agenda of the of the EuroHPC Private Members,⁸ to establish the HPC ecosystem.

The Union's financial contribution to the Joint Undertaking under the 2021-2027 MFF would be EUR [XXXX], matched by at least an equal amount of total contribution from the Participating States and the Private Members of the EuroHPC Joint Undertaking. The Joint Undertaking will use these funds mainly to implement its activities under the five pillars described above.

The main expected outcomes for the proposed EuroHPC Joint Undertaking in the next decade would include:

- A federated, secure and hyper-connected European HPC and data infrastructure with mid-range supercomputers and at least two top class exascale and two top class post-exascale systems (at least one of each category built with European technology);
- Hybrid computing infrastructures integrating advanced computing systems – notably quantum simulators and quantum computers – in HPC infrastructures;
- A secure cloud-based HPC and data infrastructure for European private users;
- HPC-powered capacities and services based on European public data spaces for scientists, industry and the public sector;
- Next generation technology building blocks (hardware and software) and their integration into innovative HPC architectures for exascale and post-exascale systems;
- Centres of Excellence in HPC applications and industrialisation of HPC software, with novel algorithms, codes and tools optimised for future generations of supercomputers;
- Large-scale industrial pilot test-beds and platforms for HPC and data applications and services in key industrial sectors;
- National HPC Competence Centres, ensuring a wide coverage of HPC in the EU, with specific services and resources for industrial innovation (including SMEs);
- A significant increase for Europe's workforce in HPC skills and know-how;
- Reinforced data storage, processing capacities, and new services, in areas of public interest across the Member States.

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

On 19 February 2020, the Commission adopted the Communication “A European Strategy for Data”,⁹ outlining Europe's strategy for policy measures and investments to support the development of the data economy over the next five years. It highlights the fact that HPC and quantum computing will be essential to ensuring the seamless provision of computing resources with different performance characteristics that will be required to maximise the

⁶ https://eurohpc-ju.europa.eu/documents/EuroHPC_RIAG_Strategic_Agenda_2019.pdf

⁷ https://eurohpc-ju.europa.eu/documents/EuroHPC_INFRAG_Multiannual_Strategic_Agenda_2019.pdf

⁸ [https://www.etp4hpc.eu/pujades/files/ETP4HPC_SRA4_2020_web\(1\).pdf](https://www.etp4hpc.eu/pujades/files/ETP4HPC_SRA4_2020_web(1).pdf)

⁹ COM/2020/66 final

growth and use of common European data spaces and federated, secure cloud infrastructures for public, industrial and scientific applications.

On 19 February 2020, the Commission also adopted the Communication “Shaping Europe’s Digital Future”¹⁰, which presented Europe’s digital strategy, focusing on key objectives to ensure that digital solutions help Europe to pursue its own way towards a digital transformation that benefits everyone. Among the key actions it proposes is investment in building and deploying cutting-edge joint digital capacities, including in supercomputing and quantum technologies, and to expand Europe’s supercomputing capacity to develop innovative solutions for medicine, transport and the environment.

- **Consistency with other Union policies**

On 10 March 2020 the Commission adopted the Communication “A New Industrial Strategy for Europe”,¹¹ setting out an ambitious industrial strategy for Europe to lead the twin transitions towards climate neutrality and digital leadership. The Communication stresses the support, among others, to the development of key enabling technologies that are strategically important for Europe’s industrial future, including HPC and quantum technologies.

Finally, in the Communication of 27 May 2020 “Europe's Moment: Repair and Prepare for the Next Generation”,¹² HPC was identified as a strategic digital capacity that will be a priority for sources of investment in Europe’s recovery, such as the Recovery and Resilience Facility, InvestEU, and the Strategic Investment Facility.

2. LEGAL BASIS, SUBSIDIARITY AND PROPORTIONALITY

- **Legal basis**

The legal basis of the proposed EuroHPC Joint Undertaking initiative 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 proposed Regulation covers the subsidiarity principles in the same way as the Council Regulation (EU) 2018/1488.

- **Proportionality**

The proposed Regulation complies with the principle of proportionality in the same way as the Council Regulation (EU) 2018/1488.

- **Choice of the instrument**

The creation and operation of a Joint Undertaking in which the Union participates requires a Council Regulation.

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

- **Stakeholder consultations**

The Commission proposal for a new Regulation of the EuroHPC Joint Undertaking draws funds from the 2021-2027 MFF and is accompanied by a Staff Working Document (SWD). The main drivers and objectives of the proposed new Regulation have remained unchanged

¹⁰ See n. **Error! Bookmark not defined.** above.

¹¹ See n. **Error! Bookmark not defined.** above.

¹² COM/2020/456 final

since its establishment. Therefore, the result of the stakeholder consultations accompanying the Council Regulation (EU) 2018/1488 remains valid. This result has been further confirmed in the stakeholder consultation accompanying the Proposal for a Regulation of the European Parliament and of the Council establishing the Digital Europe programme for the period 2021-2027.¹³ The following additional steps have been taken to consult stakeholders about the objectives and approach to implementing activities under the new Joint Undertaking, and to invite them to help shape it.

The 32 Participating States of the existing Joint Undertaking were consulted and invited to provide feedback on the objectives of the new Joint Undertaking, and also on administrative simplification, notably concerning the central management of financial contributions.

The Private Members of the EuroHPC Joint Undertaking published a Strategic Research and Innovation Agenda,¹⁴ describing the priorities for research and innovation activities in HPC, as well as infrastructure-related activities, highlighting the views of the technology supply and data analytics communities. Likewise, the Private Members were consulted regarding its future priorities and actions, and also regarding its governance, the financial contributions of the Private Members and beneficiaries of the actions implemented by the proposed Joint Undertaking, rules for participation, and simplification of administrative rules and processes.

- **Collection and use of expertise**

The Commission has experience in setting up and managing Joint Undertakings. In particular, it will benefit from the experience and lessons learnt from implementing the EuroHPC Joint Undertaking.

- **Impact assessment**

As the EuroHPC Joint Undertaking was established only in October 2018, the Impact Assessment published in January 2018 accompanying the Council Regulation (EU) 2018/1488 remains valid, as the drivers and objectives have not changed substantially.

- **Regulatory fitness and simplification**

This proposal for a Regulation establishing a Joint Undertaking is in line with the Commission's *Better Regulation Guidelines*: in particular, it proposes regulating only where necessary and in a proportionate manner. It closely follows the EuroHPC Joint Undertaking established in the Council Regulation (EU) 2018/1488 as far as possible, drawing on experience gathered in that context and taking into account the changes introduced by the funding programmes Horizon Europe, Digital Europe and the Connecting Europe Facility. It also considers where appropriate the provisions of the Single Basic Act establishing the Joint Undertakings under Horizon Europe.

4. BUDGETARY IMPLICATIONS

The EuroHPC Joint Undertaking would draw its funds from the budgets proposed by the Commission for High Performance Computing activities in the Regulations establishing Horizon Europe, Digital Europe and the Connecting Europe Facility. In total up to EUR [XXXX] would be available from the three programmes [as follows: up to EUR 2 400 000 000 from the Digital Europe Programme, up to EUR 200 000 000 from the Connecting Europe Facility and up to EUR XXXXX from Horizon Europe – budget to be

¹³ COM(2018) 434 final, SEC(2018) 289 final, SWD(2018) 306 final

¹⁴ <https://www.etp4hpc.eu/sra-020.html>

determined at a later stage according to the Strategic Planning and Programming of Horizon Europe].

This is to be matched by an at least equal amount from the Participating States, as part of their national and regional High Performance Computing programmes and their structural funds. The private entities should provide an amount of at least EUR [XXXX] [contribution to be determined at a later stage when the budget of Horizon Europe will be defined according to the Strategic Planning and Programming of Horizon Europe]. Both the Participating States and the Private Members will contribute to the administrative costs of the Joint Undertaking.

5. OTHER ELEMENTS

• **Implementation plans and monitoring, evaluation and reporting arrangements**

Evaluation and monitoring of the proposed Joint Undertaking's activities are planned, in accordance with the Horizon Europe programme. This will determine the effectiveness of the Joint Undertaking as a legal and financial instrument for achieving the objectives of Europe's High Performance Computing strategy, but also its effectiveness in contributing to the Union's policies. In particular, it will assess the level of the Participating States' and Private Members' participation in, and contribution to, the actions of the Joint Undertaking.

The proposed Joint Undertaking will publish an annual activity report highlighting actions taken, corresponding expenditure, and the acquisition and operation of the High Performance Computing, quantum computing and service and data infrastructure procured and owned by the Joint Undertaking. Achievement of the general objectives will be assessed against the general key performance indicators for Joint Undertakings funded from Horizon Europe and the key performance indicators specific to the EuroHPC Joint Undertaking.

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

Article 1 establishes the EuroHPC **Joint Undertaking**, and is specifying its **seat**.

Article 2 provides **definitions** of 'access time', 'acceptance test', 'competence centre', 'EuroHPC supercomputer', 'exascale', 'high-end supercomputer', 'mid-range supercomputer', 'quantum computer', 'quantum simulator', 'hosting entity', 'hosting agreement', 'hyper-connected', 'in-kind contribution', 'Participating State', 'Private Member', or 'user'.

Article 3 specifies the **mission** and **objectives** of the EuroHPC Joint Undertaking.

Article 4 specifies the pillars of **activities** of the EuroHPC Joint Undertaking.

Article 5 specifies the **Union's financial contribution** to the administrative and operational costs of the EuroHPC Joint Undertaking with funding from the **Horizon Europe**, the **Digital Europe Programme** and the **Connecting Europe Facility**.

Article 6 specifies what are the possible additional contributions from Union programmes other than those referred to in Article 5.

Article 7 specifies the **Participating States'** and **Private Members' funding contributions** to the administrative and operational costs.

Article 8 refers to the **hosting entity** which the Joint Undertaking is to entrust with the **operation of the pre-exascale** supercomputers and specifies the process whereby it is to be selected.

Article 9 sets out the contents of the **hosting agreement**, laying down the roles and responsibilities of the hosting entity.

Article 10 provides that the **Joint Undertaking should be the owner of the high-end supercomputers it acquires** until the end of their economic lifetime, when they will be transferred to the hosting entity.

Article 11 provides that the **Joint Undertaking should be the owner of the quantum computers and quantum simulators it acquires** until the end of their economic lifetime, when they will be transferred to the hosting entity.

Article 12 provides that the **Joint Undertaking should be the co-owner of the industrial-grade supercomputers it acquires** together with the Private Members or a consortium of private partners.

Article 13 provides that the **Joint Undertaking should be the co-owner of the mid-range supercomputers it acquires** together with the hosting entities.

Article 14 specifies the **usage** of the EuroHPC supercomputers and **access conditions** for users of the supercomputers.

Article 15 specifies how the **European Commission** and the **EuroHPC Participating States** will be compensated for their financial contribution to the acquisition of the pre-exascale supercomputers: each contributor will be allocated a share of the total **access time in proportion to its financial contribution**. It also specifies how the **Union's access time** to the EuroHPC supercomputers will be allocated.

Article 16 specifies the conditions under which the Joint Undertaking will provide **commercial services**.

Article 17 specifies the financial rules of the Joint Undertaking; these are in line with the **Financial Regulation**.

Proposal for a

COUNCIL REGULATION

on establishing the European High Performance Computing Joint Undertaking

THE COUNCIL OF THE EUROPEAN UNION,

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

Having regard to the proposal from the European Commission,

Having regard to the opinion of the European Parliament,

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

Whereas

- (1) Regulation (EU) No xxx of the European Parliament and of the Council establishes Horizon Europe – the Framework Programme for Research and Innovation (2021-2027).¹ Parts of Horizon Europe may be implemented through European Partnerships, with private and/or public sector partners, in order to achieve the greatest possible impact of Union funding and the most effective contribution to the Union's policy objectives.
- (2) In accordance with Regulation (EU) No xxx of the European Parliament and of the Council and Council Decision xxx,² support may be provided to Joint Undertakings established in the framework of Horizon Europe. Such partnerships should be implemented only where other parts of the Horizon Europe programme, including other forms of European Partnerships would not achieve the objectives or would not generate the necessary expected impacts, and if justified by a long-term perspective and high degree of integration. The conditions under which such partnerships are created are specified in that Decision.
- (3) Regulation (EU) No xxx of the European Parliament and of the Council and Council Decision establishes the Digital Europe Programme.³ The Digital Europe Programme supports the implementation of projects of common interest which aim at the acquisition, deployment and operation of a world-class supercomputing, quantum and data infrastructure, the federation and interconnection, and widening the use of supercomputing services and the development of key skills.
- (4) Regulation (EU) No xxx of the European Parliament and of the Council established the Connecting Europe Facility.⁴ The Connecting Europe Facility enables projects of common interest to be prepared and implemented within the framework of the trans-

¹ [...]
² [...]
³ [...]
⁴ [...]

European networks policy in the sectors of transport, telecommunications and energy. In particular, the Connecting Europe Facility supports the implementation of those projects of common interest which aim at the development and construction of new infrastructures and services, or at the upgrading of existing infrastructures and services, in the transport, telecommunications and energy sectors. The Connecting Europe Facility contributes to supporting digital connectivity infrastructures of common interest bringing significant spill-over societal benefits.

- (5) The Communication from the Commission of 19 February 2020 entitled ‘A European Strategy for Data’ outlines Europe’s strategy for policy measures and investments to enable the data economy for the coming five years. It emphasises the creation of European public common data spaces that will boost growth and create value. Support to the creation of such common European data spaces and federated, secure cloud infrastructures would ensure that more data becomes available for use in the economy and society, while keeping companies and individuals who generate the data in control. High Performance Computing and quantum computing are essential components of the seamless provision of computing resources with different performance characteristics required to maximize the growth and exploitation of European public common data spaces and federated, secure cloud infrastructures for public, industrial and scientific applications.
- (6) The Communication from the Commission of 19 February 2020 entitled ‘Shaping Europe’s digital future’ presents Europe’s digital strategy and focuses on few key objectives to ensure that digital solutions help Europe to pursue its own way towards a digital transformation that works for the benefit of people. Among the key actions it proposes is to invest in building and deploying cutting-edge joint digital capacities, including in supercomputing and quantum technologies, and to expand Europe’s supercomputing capacity to develop innovative solutions for medicine, transport and the environment.
- (7) The Communication from the Commission of 10 March 2020 entitled ‘A new Industrial Strategy for Europe’ is reflecting an ambitious industrial strategy for Europe to lead the twin transitions towards climate neutrality and digital leadership. The Communication stresses the support, among others, to the development of key enabling technologies that are strategically important for Europe’s industrial future, including High Performance Computing and quantum technologies.
- (8) The Communication from the Commission of 27 May 2020 entitled “Europe’s moment: Repair and Prepare for the Next Generation” identified a number of strategic digital capacities and capabilities that included High Performance Computers and quantum technologies as a priority in the Recovery and Resilience Facility, InvestEU and the Strategic Investment Facility.
- (9) Europe’s leading role in the data economy, its scientific excellence, and its industrial strength increasingly depend on its ability to develop key High Performance Computing technologies, as well as to provide access to world-class supercomputing and data infrastructures, and to maintain its present leadership in High Performance Computing applications. High Performance Computing is a mainstream technology for the digital transformation of the European economy, enabling many traditional industrial sectors to innovate with higher value products and services. In combination with other advanced digital technologies such as Artificial Intelligence, big data and cloud technologies, High Performance Computing is paving the way towards innovative societal and industrial applications in critical areas for Europe such as

personalised medicine, weather forecast and climate change, smart and green development and transport, new materials for clean energy, drug design and virtual testing, sustainable agriculture, or engineering and manufacturing.

- (10) High Performance Computing is a strategic resource for policy-making, powering applications that provide the means to understand and design efficient solutions to address many complex global challenges and for crisis management. High Performance Computing contributes to key policies such as the European Green Deal with models and tools for transforming the increasing number of complex environmental challenges into opportunities for social innovation and economic growth. An example is the Destination Earth initiative announced in the Communications from the Commission of 11 December 2019 on “The European Green Deal”, and of 19 February 2020 on “A European strategy for data” and on “Shaping Europe's digital future”.
- (11) Global events such as the COVID-19 pandemic have shown the importance of investing in High Performance Computing and health-related modelling platforms and tools, as they are playing a key role in the fight against the pandemic, often in combination with other digital technologies such as big data and artificial intelligence. High Performance Computing is being used to accelerate the identification and production of treatments, to predict the virus’ spread, to help plan the distribution of medical supplies and resources, and to simulate post-epidemic exit measures in order to evaluate different scenarios. High Performance Computing modelling platforms and tools are critical tools for the current and future pandemics, and they will play a key role in health and personalised medicine.
- (12) Council Regulation (EU) 2018/1488 of 28 September 2018 established the EuroHPC Joint Undertaking with a mission to develop, deploy, extend and maintain in the Union an integrated world-class supercomputing and data infrastructure and to develop and support a highly competitive and innovative High-Performance Computing ecosystem.
- (13) In light of developments in High Performance Computing, a revision of the Regulation to ensure the continuation of the initiative is timely. The revision of Council Regulation No (EU) 2018/1488 is needed to define a new mission and objectives for the EuroHPC Joint Undertaking, taking into consideration the analysis of the key socio-economic and technological drivers affecting the future evolution of High Performance Computing and data infrastructures, technologies and applications in the EU and worldwide, and the lessons learnt from the current activities of the EuroHPC Joint Undertaking. These are highlighted in the Staff Working Document SWD(2020)xxx accompanying the Commission’s proposal for a Council Regulation. The revision also allows for the alignment of the EuroHPC Joint Undertaking’s rules with the new legal framework, in particular the Horizon Europe Regulation, as well as the Digital Europe Programme and the Connecting Europe Facility Regulations.
- (14) In order to equip the Union with the computing performance needed to maintain its research and industrial capacities at a leading edge, the Member States investment in High Performance Computing and quantum computing should be coordinated and the industrial and market take-up of High Performance Computing and quantum computing technologies be reinforced both in the public and private sectors. The Union should increase its effectiveness in turning the technology developments into demand-oriented and application-driven European High Performance Computing and quantum computing systems of the highest quality, establishing an effective link between technology supply, co-design with users, and a joint procurement of world-

class systems, and creating a world-class ecosystem in High Performance Computing and quantum computing technologies and applications. At the same time, the Union should provide an opportunity for its supply industry to leverage on such investments, leading to their uptake in large-scale and emerging application fields such as personalised medicine, climate change, connected and automated driving or other lead markets that are underpinned by artificial intelligence, blockchain technologies, edge computing or more broadly by the digitalisation of the European industry.

- (15) In order for the Union and its Member States to reach technological autonomy in key digital technologies such as High Performance Computing and quantum computing, they should invest in next generation low-power supercomputing technologies, innovative software and advanced supercomputing systems for exascale and post-exascale computing and quantum computing, and for innovative supercomputing and data applications for medicine, the environment, manufacturing and engineering. This should allow the European supply industry to thrive in a wide range of key technology and application areas that reach beyond High Performance Computing and quantum computing and, in the long run, feed broader ICT markets with such technologies. It would also support the High Performance Computing and quantum computing science and user industry to undergo a digital transformation and boost its innovation potential.
- (16) Pursuing a common strategic EU vision in High Performance Computing and quantum computing is essential for realising the Union's and its Member States' ambition to ensure a leading role and strategic autonomy in the digital economy. The objective would be to establish in Europe a world leading hyper-connected, federated and secure High Performance Computing and quantum computing service and data infrastructure ecosystem, and be in a position to produce innovative and competitive High Performance Computing and quantum computing systems based on a supply chain that will ensure components, technologies and knowledge limiting the risk of disruptions.
- (17) A Joint Undertaking represents the best instrument capable to implement the strategic EU vision in High Performance Computing and quantum computing, ensuring that the Union enjoys world-class supercomputing, quantum computing and data capabilities according to its economic potential, matching the needs of European users, and with the required strategic autonomy in critical High Performance Computing and quantum computing technologies. The Joint Undertaking is the best instrument to overcome the present limitations, as described in the Staff Working Document accompanying this Regulation, while offering the highest economic, societal, and environmental impact and best safeguarding the Union's interests in High Performance Computing and quantum computing. It can pool resources from the Union, the Member States and countries associated to Horizon Europe and the Digital Europe Programme or the Connecting Europe Facility and the private sector. It can implement a procurement framework and operate world-class High Performance Computing and quantum computing systems. It can launch research and innovation programmes for developing European technologies and their subsequent integration in world-class supercomputing systems.
- (18) The EuroHPC Joint Undertaking is part of the Institutionalised Partnerships portfolio under Horizon Europe which should strive to strengthen EU scientific capacities to deal with emerging threats and future challenges in a reinforced European Research Area; secure sustainability-driven EU value chains and EU strategic autonomy in key technologies and industries; and enhance the uptake of innovative solutions addressing

climate, environmental, health and other global societal challenges in line with Union strategic priorities, including to reach climate neutrality in the Union in 2050.

- (19) The Joint Undertaking should be set up and start operating at the latest by early 2021 until 31 December 2033 to equip the Union with a world-class federated, secure and hyper-connected supercomputing infrastructure, and to develop the necessary technologies, applications and skills for reaching exascale capabilities around 2022-2024, and post exascale around 2025 – 2027, while promoting a world-class European High Performance Computing and quantum computing innovation ecosystem.
- (20) The public-private partnership in the form of the Joint Undertaking should combine the financial and technical means that are essential to master the complexity of the ever escalating pace of innovation in this area. Therefore, the members of the Joint Undertaking should be the Union, Member States and countries associated to Horizon Europe, the Digital Europe Programme or the Connecting Europe Facility agreeing on a joint European initiative in High Performance Computing and quantum computing; and associations representing their constituent entities and other organisations with an explicit and active engagement to produce research and innovation results, to develop and deploy high performance computing or quantum computing capabilities, or contributing to address the skills gap and keep the know-how in the field of High Performance Computing and quantum computing in Europe. The Joint Undertaking should be open to new members.
- (21) The Union, the Participating States and the Private Members of the Joint Undertaking should each provide a financial contribution to the administrative costs of the Joint Undertaking.
- (22) With a view to regaining a leading position in High Performance Computing technologies, and developing a full High Performance Computing and quantum computing ecosystem for the Union, the industrial and research stakeholders in the European Technology Platform for High Performance Computing (ETP4HPC) private Association have established a contractual Public Private Partnership with the Union in 2014. Its mission is to build a European world-class High Performance Computing technology value chain that should be globally competitive, fostering synergies between the three main components of the High Performance Computing ecosystem, namely technology development, applications and supercomputing infrastructure. Considering its expertise, and its role in bringing together the relevant private stakeholders in High Performance Computing, the ETP4HPC private Association should be eligible for membership in the Joint Undertaking.
- (23) With a view to strengthening the data value chain, enhancing community building around data and setting the grounds for a thriving data-driven economy in the Union, the industrial and research stakeholders in the Big Data Value Association (BDVA) have established in 2014 a contractual public private partnership with the Union. Considering its expertise and its role in bringing together the relevant private stakeholders of big data, BDVA should be eligible for membership in the Joint Undertaking.
- (24) The private associations ETP4HPC and BDVA have expressed, in writing, their willingness to contribute to the Joint Undertaking's technological strategy and bring their expertise into the realisation of the objectives of the Joint Undertaking. It is appropriate that the private associations accept the Statutes set out in the Annex to this Regulation by means of a letter of endorsement.

- (25) The Joint Undertaking should address clearly defined topics that would enable academia and European industries at large to design, develop and use the most innovative technologies in High Performance Computing and quantum computing, and to establish an integrated and federated, secure networked infrastructure across the Union with world-class High Performance Computing and quantum computing capability, high-speed connectivity and leading-edge applications and data and software services for its scientists and for other lead users from industry, including SMEs and the public sector. The Joint Undertaking should aim at the development and use of top class technologies and infrastructures, addressing the demanding requirements of European scientific, industrial and public sector users.
- (26) The Joint Undertaking should contribute to reducing the specific skills gap across the Union by engaging in awareness raising measures and assisting in the building of new knowledge and human capital.
- (27) In line with the external policy objectives and international commitments of the Union, the Joint Undertaking should facilitate cooperation between the Union and international actors by defining a cooperation strategy, including identifying and promoting areas for cooperation in R&D and skills development and implementing actions where there is a mutual benefit, as well as ensuring an access policy of respective High Performance Computing and quantum computing capabilities and applications mainly based on reciprocity.
- (28) The Joint Undertaking should aim at promoting the exploitation of any resulting High Performance Computing technologies in the EU. It should also aim at safeguarding the investments in the supercomputers it acquires. In doing so, it should take appropriate measures to ensure the security of the supply chain of acquired technologies that should cover the whole lifetime of these supercomputers.
- (29) The Joint Undertaking should lay the ground for a longer-term vision and build the first hybrid High Performance Computing infrastructure in Europe, integrating classical computing architectures with quantum computing devices. Structured and coordinated financial support at European level is necessary to help research teams and European industries produce world-class results to ensure the fast and broad industrial exploitation of European research and technology across the Union, generating important spill-overs for society, to share risk-taking and joining of forces by aligning strategies and investments towards a common European interest.
- (30) In order to achieve its objectives to design, develop and use the most innovative technologies in High Performance Computing and quantum computing, the Joint Undertaking should provide financial support in particular in the form of grants and procurement following open and competitive calls for proposals and calls for tenders based on annual work programmes. Such financial support should be targeted in particular at proven market failures that prevent the development of the programme concerned, should not crowd-out private investments and should have an incentive effect in that it changes the behaviour of the recipient.
- (31) In order to achieve its objectives to increase the innovation potential of industry, and in particular of SMEs, to contribute to reducing the specific skills gap, to support the increase of knowledge and human capital and to upraise High Performance Computing and quantum computing capabilities, the Joint Undertaking should support the creation, and in particular the networking and coordination of national High Performance Computing competence centres across the Union. These competence centres should provide High Performance Computing and quantum computing

services to industry, academia and public administrations on their demand. They should primarily promote and enable access to the High Performance Computing innovation ecosystem, facilitate access to the supercomputers and quantum computers, address the significant shortages in skilled technical experts by undertaking awareness raising, training and outreach activities, and embark on networking activities with stakeholders and other competence centres to foster wider innovations, for example by exchanging and promoting best practice use cases or application experiences, by sharing their training facilities and experiences, by facilitating the co-development and exchange of parallel codes, or by supporting the sharing of innovative applications and tools for public and private users, in particular SMEs.

- (32) The Joint Undertaking should provide a demand-oriented and user-driven framework and enable a co-design approach for the acquisition of an integrated, world-class federated, secure and hyper-connected supercomputing and quantum computing service and data infrastructure in the Union, in order to equip users with the strategic computation resource they need to develop new, innovative solutions and to solve societal, environmental, economic and security challenges. For this purpose, the Joint Undertaking should contribute to the acquisition of world-class supercomputers. The supercomputers of the Joint Undertaking, including quantum computers, should be installed in a Participating State that is a Member State.
- (33) The Joint Undertaking should hyper-connect all the supercomputers and data infrastructures it will own or co-own with state-of-the-art networking technologies, making them widely accessible across the Union, and should interconnect and federate its supercomputing and quantum computing data infrastructure, as well as national, regional and other computing infrastructures with a common platform. The Joint Undertaking should also ensure the interconnection of the federated, secure supercomputing, and quantum computing service and data infrastructures with the common European data spaces and federated, secure cloud infrastructures announced in the Communication from the Commission of 19 February 2020 on ‘A European Strategy for Data’, for seamless service provisioning to a wide range of public and private users across Europe.
- (34) Horizon Europe and the Digital Europe Programme should respectively contribute to the closing of the research and innovation divide within the Union and to deploying wide-range supercomputing capabilities by promoting synergies with the European Structural and Investments Funds (ESIF). Therefore, the Joint Undertaking should seek to develop close interactions with the ESIF, which can specifically help to strengthen local, regional and national research and innovation capabilities.
- (35) The Joint Undertaking should provide a favourable framework for Participating States that are Member States to use their ESIF for the acquisition of High Performance Computing and quantum computing and data infrastructures and their interconnection. The use of ESIF in the Joint Undertaking activities is essential for developing in the Union an integrated, federated, secure and hyper-connected world-class High Performance Computing, quantum computing service and data infrastructure, since the benefits for such infrastructure extend well beyond the users of the Member States. If Member States decide to use ESIF for contributing to the acquisition costs of the supercomputers and quantum computers of the Joint Undertaking, the Joint Undertaking should take into consideration the Union's share of ESIF of this Member State, while accounting only the national ESIF share as national contribution to the budget of the Joint Undertaking.

- (36) The Union's contribution from the Digital Europe Programme funds should partly cover the acquisition costs of high-end supercomputers, quantum computers, industrial-grade supercomputers and mid-range supercomputers to align with the Joint Undertaking's objective to contribute to the pooling of resources for equipping the Union with top-class supercomputers and quantum computers. The complementary costs of these supercomputers and quantum computers should be covered by the Participating States, or the Private Members or consortia of private partners. The share of the Union's access time to these supercomputers or quantum computers should be directly proportional to the financial contribution of the Union made for the acquisition of these supercomputers and quantum computers and should not exceed 50% of the total access time of these supercomputers or quantum computers.
- (37) The Joint Undertaking should be the owner of the high-end supercomputers and quantum computers it has acquired. The operation of each high-end supercomputer or quantum computer should be entrusted to a hosting entity. The hosting entity should be able to represent a single Participating State that is a Member State or a hosting consortium of Participating States. The hosting entity should be in position to provide an accurate estimate and to verify the operating costs of the supercomputer, by ensuring, for example, the functional separation, and to the extent possible, the physical separation of the Joint Undertaking's high-end supercomputers or quantum computers and any national or regional computing systems it operates. The hosting entity should be selected by the Governing Board of the Joint Undertaking ('Governing Board') following a call for expression of interest evaluated by independent experts. Once a hosting entity is selected, the Participating State where the hosting entity is established or the hosting Consortium should be able to decide to call for other Participating States to join and contribute to the funding of the high-end supercomputer or quantum computer to be installed in the selected hosting entity. If additional Participating States join the selected hosting Consortium, this should be without prejudice to the Union's access time to the supercomputers. The contributions of the Participating States in a hosting Consortium to the supercomputer or quantum computer should be translated into shares of access time to that supercomputer or quantum computer. The Participating States should agree among themselves the distribution of their share of access time to the supercomputer or the quantum computer.
- (38) The Joint Undertaking should remain the owner of supercomputers or quantum computers it acquires until they are depreciated. The Joint Undertaking should be able to transfer this ownership to the hosting entity for decommissioning, disposal or any other use. When the ownership is transferred to the hosting entity or when the Joint Undertaking is being wound up, the hosting entity should reimburse the Joint Undertaking the residual value of the supercomputer or the quantum computer.
- (39) The Joint Undertaking should jointly with Participating States acquire the mid-range supercomputers. The operation of each mid-range supercomputer should be entrusted to a hosting entity. The hosting entity should be able to represent a single Participating State that is a Member State or a hosting consortium of Participating States. The Joint Undertaking should own the part that corresponds to the Union's share of financial contribution to the acquisition costs from Digital Europe Programme funds. The hosting entity should be selected by the Governing Board following a call for expression of interest evaluated by independent experts. The share of the Union's access time to each mid-range supercomputer should be directly proportional to the financial contribution of the Union from Digital Europe Programme funds to the

acquisition costs of that mid-range supercomputer. The Joint Undertaking should be able to transfer its ownership to the hosting entity or when it is being wound up. The hosting entity should reimburse the Joint Undertaking the residual value of the supercomputer.

- (40) The Joint Undertaking should be able to acquire together with the Private Members or a consortium of private partners industrial-grade supercomputers. The operation of each such supercomputer should be entrusted to an existing hosting entity. The hosting entity should be able to associate itself with the Private Members or the consortium of private partners for the acquisition and operation of such supercomputer. The Joint Undertaking should own the part that corresponds to the Union's share of financial contribution to the acquisition costs from Digital Europe Programme funds. The hosting entity and its associated Private Members or consortium of private partners should be selected by the Governing Board following a call for expression of interest evaluated by independent experts. The share of the Union's access time to such supercomputer should be directly proportional to the financial contribution of the Union from Digital Europe Programme funds to the acquisition costs of that industrial-grade supercomputer. The Joint Undertaking should be able to reach an agreement with the Private Members or the consortium of private partners to sell such supercomputer to another entity or decommission it. Alternatively, the Joint Undertaking should be able to transfer the ownership of such supercomputer to the Private Members or the consortium of private partners. In this case or when the Joint Undertaking is being wound-up, the Private Members or the consortium of private partners should reimburse the Joint Undertaking the residual value of the Union's share of the supercomputer. In the case the Joint Undertaking and the Private Members or the consortium of private partners decide to proceed to the decommissioning of the supercomputer after the full depreciation of its operation, such costs should be covered by the Private Members or the consortium of private partners.
- (41) For industrial-grade supercomputers the Joint Undertaking should take into account the specific needs of industrial users, for example access procedures, quality and type of services, protection of data, protection of industrial innovation, and intellectual property, usability, trust, and other confidentiality and security requirements.
- (42) The design and operation of the supercomputers supported by the Joint Undertaking should take into consideration energy efficiency and environmental sustainability, using for example low-power technology, dynamic power-saving and re-use techniques like advanced cooling and heat recycling.
- (43) The use of the supercomputers of the Joint Undertaking should be primarily for civilian applications for public and private users residing, established or located in a Member State or in a country associated to the Digital Europe Programme and to Horizon Europe. Users should be granted access time according to access policy rules defined by the Governing Board. The use of these supercomputers should also respect international agreements concluded by the Union.
- (44) User allocation of access time to the supercomputers of the Joint Undertaking should be free of charge for public users. It should also be free of charge for private users for their applications related to research and innovation activities funded by Horizon Europe or the Digital Europe Programme, as well as for private innovation activities of SMEs, where appropriate. Such allocation of access time should primarily be based on open calls for expression of interest launched by the Joint Undertaking and evaluated by independent experts. With the exception of SME users undertaking private

innovation activities, all users benefiting from free-of-charge access time to the supercomputers of the Joint Undertaking should adopt an open science approach and disseminate knowledge gained through this access, in accordance with the Horizon Europe Regulation. User allocation of access time for economic activities other than private innovation activities of SMEs (which face particular market failures), should be granted on a pay-per-use basis, based on market prices. Allocation of access time for such economic activities should be allowed but limited and the level of the fee to be paid should be established by the Governing Board. The access rights should be allocated in a transparent manner. The Governing Board should define specific rules to grant access time free of charge, where appropriate, and without a call for expression of interest to initiatives that are considered strategic either by the Union or by the Governing Board. Representative examples of strategic initiatives of the Union include: Destination Earth, the Human Brain Project Flagship, the “1+ Million Genomes” initiative, the common European data spaces operating in domains of public interest, and in particular the health data space, the High Performance Computing Centres of Excellence and Competence Centres, the Digital Innovation Hubs, etc. Upon Union’s request, the Joint Undertaking should grant direct access time on a temporary or permanent basis to strategic initiatives and existing or future application platforms that it considers essential for providing health-related or other crucial emergency support services for the public good, to emergency and crisis management situations or to cases that the Union considers essential for its security and defence. The Joint Undertaking should be allowed to carry out some limited economic activities for commercial purposes. Access should be granted to users residing, established or located in an EU Member State or a country associated to the Digital Europe Programme and to Horizon Europe. The access rights should be equitable to any user and allocated in a transparent manner. The Governing Board should define and monitor the access rights to the Union's share of access time for each supercomputer.

- (45) Access to the Union’s share of access time of the precursors to exascale and petascale supercomputers acquired by the Joint Undertaking established under the Council Regulation 2018/1488 should continue to be granted to users established in the Union or a country associated to Horizon 2020.
- (46) The supercomputers of the Joint Undertaking should be operated and used in compliance with Regulation (EU) 2016/679⁵, Directive 2002/58/EC⁶ and Directive (EU) 2016/943.⁷
- (47) The Joint Undertaking governance should be assured by two bodies: a Governing Board, and an Industrial and Scientific Advisory Board. The Governing Board should be composed of representatives of the Union and Participating States. The Governing Board should be responsible for strategic policy making and funding decisions related

⁵ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 4.5.2016, p. 1).

⁶ Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications) (OJ L 201, 31.7.2002, p. 37).

⁷ Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure (OJ L 157, 15.6.2016, p. 1).

to the activities of the Joint Undertaking, including all the public procurement activities. The Industrial and Scientific Advisory Board should include representatives of academia and industry as users and technology suppliers. It should provide independent advice to the Governing Board on the strategic research and innovation agenda, on the acquisition and operation of the supercomputers owned by the Joint Undertaking, the capability building and widening activities programme and the federation, connectivity and international cooperation activities programme.

- (48) For the general administrative tasks of the Joint Undertaking, the voting rights of the Participating States should be distributed equally among them. For the tasks corresponding to the setting up of the part of the work programme related to the acquisition of the supercomputers and quantum computers, the selection of the hosting entity and the federation and connectivity activities of the Joint Undertaking, the voting rights of the Participating States that are Member States should be based on the principle of qualified majority. The Participating States that are countries associated to Horizon Europe, the Digital Europe Programme and the Connecting Europe Facility should also hold voting rights for the respective activities that are supported with budgetary envelopes from each of these programmes. For the tasks corresponding to the acquisition and operation of the supercomputers and quantum computers, only those Participating States and the Union that contribute resources to these tasks should have voting rights.
- (49) The Union's financial contribution should be managed in accordance with the principle of sound financial management and with the relevant rules on indirect management set out in Regulation (EU, Euratom) 2018/1046. Rules applicable for the Joint Undertaking to enter into public procurement procedures should be set in its financial rules.
- (50) To foster an innovative and competitive European High Performance Computing and quantum computing ecosystem of recognised excellence, the Joint Undertaking should make appropriate use of the procurement and grant instruments, including joint procurement, pre-commercial procurement and public procurement of innovative solutions.
- (51) In assessing the overall impact of the Joint Undertaking, investments in indirect actions from the Private Members should be taken into account, as in-kind contributions consisting of the eligible costs incurred by them in implementing actions, less the contributions by the Joint Undertaking, the Participating States or any other Union contribution to those costs. In assessing the overall impact of the Joint Undertaking, investments in other actions from the Private Members should be taken into account, as in-kind contributions consisting of the eligible costs incurred by them in implementing the actions, less the contributions by the Joint Undertaking, the Participating States or any other Union contribution to those costs.
- (52) In order to maintain a level playing field for all undertakings active in the internal market, funding from the Union Framework Programmes should be consistent with State aid principles so as to ensure the effectiveness of public spending and prevent market distortions such as crowding-out of private funding, the creation of ineffective market structures, the preservation of inefficient firms or the creation of a subsidies-relying culture.
- (53) Participation in indirect actions funded by the Joint Undertaking should comply with Regulation (EU) No xxx establishing Horizon Europe. The Joint Undertaking should, moreover, ensure the consistent application of those rules based on relevant measures

adopted by the Commission. In order to ensure appropriate co-financing of indirect actions by the Participating States, in compliance with Regulation (EU) No xxx establishing Horizon Europe, the Participating States should contribute an amount at least equal to the reimbursement provided by the Joint Undertaking for the eligible costs incurred by beneficiaries in the actions. To this effect, the maximum funding rates set out in the annual work programme of the Joint Undertaking in accordance with Article 30 of Regulation (EU) No xxx establishing Horizon Europe should be fixed accordingly.

- (54) Provision of financial support to activities from the Digital Europe Programme should comply with rules of Regulation (EU) No xxx establishing Digital Europe.
- (55) Provision of financial support to activities from the Connecting Europe Facility should comply with rules of Regulation (EU) No xxx establishing the Connecting Europe Facility.
- (56) The financial interests of the Union and of the other members of the Joint Undertaking should be protected by proportionate measures throughout the expenditure cycle, including the prevention, detection and investigation of irregularities, the recovery of lost, wrongly paid or incorrectly used funds and, where appropriate, the application of administrative and financial penalties in accordance with Regulation (EU, Euratom) 2018/1046.
- (57) The Joint Undertaking should operate in an open and transparent way providing all relevant information in a timely manner as well as promoting its activities, including information and dissemination activities, to the wider public. The rules of procedure of the bodies of the Joint Undertaking should be made publicly available.
- (58) For the purpose of simplification, the administrative burden should be reduced for all parties. Double audits and disproportionate amounts of documentation and reporting should be avoided.
- (59) In accordance with the Horizon Europe Regulation, Participating States should entrust the Joint Undertaking with the implementation of their contribution to their national participants in indirect actions. The beneficiaries should sign a single grant agreement with the Joint Undertaking following the Horizon Europe, the Digital Europe Programme or the Connecting Europe Facility rules, including the respective framework for intellectual property rights, depending on the Union programme supporting the corresponding grant activity. The Joint Undertaking should process the cost claims and execute the payments to the beneficiaries.
- (60) Considering that Participating States have to abide by strict national budgetary rules, this should be taken into account in the implementation by the Joint Undertaking of their contributions to their national participants in indirect actions. In this respect, Participating States and the Joint Undertaking should conclude legally binding agreements committing Participating States to the payment of the full amount of their contribution to indirect actions throughout the lifetime of the initiative. Such agreements should be concluded in the context of the annual budgetary procedure and programming of the Joint Undertaking. The Governing Board should adopt the annual work programme taking due account of those agreements. Only after that and in line with the Joint Undertaking's financial rules, the authorising officer should make the budgetary and legal commitments for those indirect actions.
- (61) The Commission's internal auditor should exercise the same powers over the Joint Undertaking as those exercised in respect of the Commission.

- (62) The Commission, the Joint Undertaking, the Court of Auditors and the European Anti-Fraud Office (OLAF) and the European Public Prosecutor's Office (EPPO) should get access to all necessary information and the premises to conduct audits and investigations on the grants, contracts and agreements signed by the Joint Undertaking.
- (63) All calls for proposals and all calls for tender under this Regulation should take into account the duration of Horizon Europe, the Digital Europe Programme and the Connecting Europe Facility, as appropriate, except in duly justified cases. All procurement procedures for the acquisition of the supercomputers and quantum computers of the Joint Undertaking should take place following the applicable provisions of the Digital Europe Programme.
- (64) An interim and a final evaluation of the Joint Undertaking should be conducted by the Commission with the assistance of independent experts. In a spirit of transparency, the relevant independent experts' report should be made publicly available, in compliance with the applicable rules.
- (65) Since the objectives of this Regulation, namely the strengthening of research and innovation capabilities, the development of supercomputing capability building and widening activities, the federation, connectivity and international cooperation and the acquisition of world-class supercomputers, and access to High Performance Computing, quantum computing service 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 the Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union (TEU). In accordance with the principle of proportionality as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve those objectives.

HAS ADOPTED THIS REGULATION:

Article 1

Establishment

- (1) For the implementation of the initiative on European High Performance Computing, a Joint Undertaking within the meaning of Article 187 of the Treaty on the Functioning of the European Union (TFEU) (the 'European High performance Computing Joint Undertaking', the 'Joint Undertaking') is hereby established.
- (2) In order to take into account the duration of the European Framework Programme for Research and Innovation (Horizon Europe) established by Regulation (EU) No xxx, the Digital Europe Programme established by Regulation (EU) No xxx, and the Connecting Europe Facility (Connecting Europe Facility) established by Regulation (EU) No xxx, calls for proposals and calls for tenders under this Regulation shall be launched by 31 December 2027. In duly justified cases, calls for proposals or calls for tender may be launched by 31 December 2028.
- (3) The Joint Undertaking shall have legal personality. In each Member State, it shall enjoy the most extensive legal capacity accorded to legal persons under the laws of

that Member State. It may, in particular, acquire or dispose of movable and immovable property and may be a party to legal proceedings.

- (4) The seat of the Joint Undertaking shall be located in Luxembourg.
- (5) The Statutes of the Joint Undertaking ('the Statutes') are set out in the Annex.

Article 2

Definitions

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

- (1) 'acceptance test' means a test conducted to determine if the requirements of the system specification are met by a EuroHPC supercomputer;
- (2) 'access time' means the computing time of a supercomputer that is made available to a user or a group of users to execute their computer programmes;
- (3) 'affiliated entity' means any legal entity as defined in Article 187(1) of Regulation (EU, Euratom) 2018/1046;
- (4) 'Centre of Excellence' in HPC means an initiative to promote the use of upcoming extreme performance computing capabilities enabling user communities in collaboration with other HPC stakeholders to scale up existing parallel codes towards exascale and extreme scaling performance;
- (5) 'co-design' is a collective approach between technology suppliers and users engaged in a collaborative and iterative design process for developing new technology, application and systems;
- (6) 'Competence Centre' in High Performance Computing (HPC) means a legal entity established in a Participating State providing users from industry, including SMEs, academia, and public administrations with access on demand to the supercomputers and to the latest High Performance Computing technologies, tools, applications and services, and offering expertise, skills, training, networking and outreach;
- (7) 'conflict of interest' means a situation involving a financial actor or other person as referred to in Article 61 of Regulation (EU) No 2018/1046;
- (8) 'constituent entity' means an entity that constitutes a Private Member of the Joint Undertaking, pursuant to the statutes of each Private Member;
- (9) 'Consortium of private partners' means an association of European legal entities coming together for the purpose of acquiring jointly with the EuroHPC Joint Undertaking an industrial-grade supercomputer; one or more of these private partners may be participating in the Private Members of the Joint Undertaking.
- (10) 'EuroHPC supercomputer' means any computing system fully owned by the Joint Undertaking or co-owned with other Participating States, Private Members or a consortium of private partners. A EuroHPC supercomputer can be a classical supercomputer (high-end supercomputer, industrial-grade supercomputer, or mid-range supercomputer), a hybrid classical-quantum computer, a quantum computer or a quantum simulator;
- (11) 'exascale' means a performance level capable of executing ten to the power of eighteen operations per second (or 1 Exaflop);

- (12) ‘high-end supercomputer’ means a world-class computing system developed with the most advanced technology available at a given point in time and achieving at least exascale levels of performance or beyond (i.e., post-exascale) for applications addressing problems of greater complexity;
- (13) ‘hosting consortium’ means a group of Participating States, Private Members or a consortium of private partners that have agreed to contribute to the acquisition and operation of a EuroHPC supercomputer, including any organisations representing these Participating States;
- (14) ‘hosting entity’ means a legal entity which includes facilities to host and operate a EuroHPC supercomputer and which is established in a Participating State that is a Member State;
- (15) ‘hyper-connected’ means a communication capability of transferring data at 10 to the power of twelve bits per second (1 Terabit per second) or beyond;
- (16) ‘industrial-grade supercomputer’ means a supercomputer specifically designed with security, confidentiality and data integrity requirements for industrial users that are more demanding than for a scientific usage;
- (17) ‘in-kind contributions to indirect actions’ funded from Horizon Europe means contributions by the Participating State or the Private Members of the Joint Undertaking or their constituent entities or their affiliated entities, consisting of the eligible costs incurred by them in implementing indirect actions less the contribution of that Joint Undertaking, the Participating States of that Joint Undertaking and any other Union contribution to those costs;
- (18) ‘in-kind contributions to actions’ funded from the Digital Europe Programme or the Connecting Europe Facility means contributions by the Participating State or the Private Members of the Joint Undertaking or their constituent entities or their affiliated entities, consisting of the eligible costs incurred by them in implementing part of the activities of the Joint Undertaking less the contribution of that Joint Undertaking, the Participating States of that Joint Undertaking and any other Union contribution to those costs;
- (19) ‘mid-range supercomputer’ means a world-class supercomputer with at most one order of magnitude lower performance level than a high-end supercomputer;
- (20) ‘national High Performance Computing competence centre’ means a legal entity established in a Participating State that is a Member State, associated with the national supercomputing centre of that Member State, providing users from industry, including SMEs, academia, and public administrations with access on demand to the supercomputers and to the latest High Performance Computing technologies, tools, applications and services, and offering expertise, skills, training, networking and outreach;
- (21) ‘observer State’ means a country eligible to participate in the actions of the Joint Undertaking funded by the Horizon Europe or Digital Europe Program that is not a Participating State;
- (22) ‘Participating State’ means a country that is a member of the Joint Undertaking;
- (23) ‘performance level’ means the number of floating point operations per second (flops) that a supercomputer can execute;

- (24) ‘Private Member’ means any Member of the Joint Undertaking other than the Union or Participating States;
- (25) ‘quantum computer’ is a computing device that harnesses the laws of quantum mechanics to solve certain particular tasks using therefore fewer computational resources than classical computers;
- (26) ‘quantum simulator’ means a highly controllable quantum device that allows to obtain insights into properties of complex quantum systems or to solve specific computational problems inaccessible to classical computers;
- (27) ‘security of the supply chain’ of a EuroHPC supercomputer means the measures to include in the selection of any supplier of this supercomputer to ensure the availability of components, technologies, systems and knowhow required in the acquisition and operation of this supercomputer; this includes measures for mitigating the long term risks related to eventual disruptions in the supply of such components, technologies, and systems, including price changes or lower performance or alternative sources of supply. The security of the supply chain covers the whole lifetime of the EuroHPC supercomputer.
- (28) ‘Strategic Research and Innovation Agenda’ means the document provided by the Private Members covering the duration of Horizon Europe that identifies the key priorities and the essential technologies and innovations required to achieve the objectives of the Joint Undertaking;
- (29) ‘supercomputing’ means computing at performance levels requiring the massive integration of individual computing elements, including quantum components, for solving problems which cannot be handled by standard computing systems;
- (30) ‘total cost of ownership’ of a EuroHPC supercomputer means the acquisition costs plus the operating costs, including maintenance, until the ownership of the supercomputer is transferred to the hosting entity or is sold, or until the supercomputer is decommissioned without transfer of ownership;
- (31) ‘work programme’ means the document referred to in point (20) of Article 2 of Regulation (EU) No xxx establishing Horizon Europe or, where relevant, the document which also functions as the work programme referred to in Article xxx of Regulation (EU) No xxx establishing the Digital Europe Programme, or Article xxx of Regulation (EU) No xxx establishing the Connecting Europe Facility.

Article 3

Mission and objectives

- (1) 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; support the production of innovative and competitive supercomputing 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, widen the use of this supercomputing infrastructure to a large number of public and private users, and support the development of key skills for European science and industry.
- (2) The Joint Undertaking shall have the following overall objectives:

- (a) to contribute to the implementation of Regulation (EU) No xxx establishing Horizon Europe and in particular Article 3 thereof, to deliver scientific, economic, environmental, technological and societal impact from the Union's investments in research and innovation, so as to strengthen the scientific and technological bases of the Union, deliver on the Union strategic priorities, contribute to the realisation of EU objectives and policies, and contribute to tackling global challenges, including the Sustainable Development Goals by following the principles of the Agenda 2030 and the Paris Agreement;
 - (b) to develop close cooperation and ensure coordination with other European Partnerships, including through joint calls, as well as seek synergies with relevant activities and programmes at Union, national, and regional level, in particular with those supporting the deployment of innovative solutions, education and regional development, where relevant;
 - (c) to develop, deploy, extend and maintain in the Union an integrated, demand-oriented and user-driven hyper-connected world-class supercomputing and data infrastructure;
 - (d) to federate the hyper-connected supercomputing and data infrastructure and interconnect it with the European data spaces and cloud ecosystem for providing computing and data services to a wide range of public and private users in Europe;
 - (e) to further develop and support a highly competitive and innovative supercomputing and data ecosystem in Europe contributing to the standing and technological autonomy of the Union in the digital economy, capable to autonomously produce computing technologies and architectures and their integration on leading computing systems, and advanced applications optimised for these systems;
 - (f) to widen the use of supercomputing services and the development of key skills that European science and industry need.
- (3) The Joint Undertaking shall contribute to safeguarding the interests of the Union when procuring supercomputers and supporting the development of High Performance Computing 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 technological autonomy by supporting the development of technologies and applications reinforcing the European HPC technology supply chain and promoting their integration in supercomputing systems that address a large number of societal and industrial needs.

Article 4

Pillars of activity

- (1) The Joint Undertaking shall implement the mission referred to in Article 3 according to the following pillars of activities:
- (a) Administration pillar, covering the general activities for the operation and management of the Joint Undertaking.
 - (b) Infrastructure pillar, encompassing the activities for the acquisition, deployment, and operation of the secure, hyper-connected world-class

supercomputing, quantum computing and data infrastructure, including the promotion of the uptake and systematic use of research and innovation results generated in the Union.

- (c) Federation of supercomputing services pillar, covering all activities for providing EU-wide access to federated, secure supercomputing and data resources and services throughout Europe for the research and scientific community, industry (including SMEs) and the public sector. In particular this includes:
 - (i) support to the interconnection of the High Performance Computing, quantum computing and data resources owned fully or partially by the EuroHPC Joint Undertaking or made available on a voluntary basis by the Participating States;
 - (ii) support to the interconnection of the supercomputing, and quantum computing data infrastructures with the Union's common European data spaces and federated, secure cloud infrastructures;
 - (iii) support to the development, acquisition and operation of a platform for the seamless federation and secure service provisioning of supercomputing and quantum computing service and data infrastructure, establishing a one-stop shop access point for any supercomputing or data service managed by the Joint Undertaking, providing any user with a single point of entry.
- (d) Technology pillar, addressing the activities for supporting an ambitious research and innovation agenda for developing a world-class, competitive and innovative supercomputing ecosystem addressing hardware and software technologies, and their integration into computing systems, covering the whole scientific and industrial value chain, for ensuring technological autonomy of the Union. Focus shall be on energy-efficient High Performance Computing technologies. Activities shall address inter alia:
 - i) low-power micro-processing components, and related technologies such as novel algorithms, software codes, tools, and environments;
 - ii) emerging computing paradigms and their integration into leading supercomputing systems, including High Performance Computing and quantum computing systems through a co-design approach. These technologies shall be linked with the development, acquisition and deployment of high-end supercomputers, including quantum computers, and infrastructures.
 - iii) technologies and systems for the interconnection and operation of classical supercomputing systems with other, often complementary computing technologies, such as neuromorphic or quantum computing and ensure their effective operation.
- (e) Application pillar, addressing activities for achieving and maintaining European excellence in key computing and data applications and codes for science, industry (including SMEs) and the public sector, including:
 - i) applications for public and private users that exploit the capabilities of high-end supercomputers and their convergence with advanced digital technologies such as artificial intelligence, high performance data

analytics, cloud technologies, etc. through the co-design, development and optimisation of High Performance Computing-enabled large-scale and emerging lead-market codes and applications;

- ii) support, among others, to Centres of Excellence in High Performance Computing applications and large-scale High Performance Computing-enabled pilot demonstrators and test-beds for big data applications and services in a wide range of scientific and industrial sectors.
- (f) Widening usage and skills pillar, aiming at fostering excellence in supercomputing, quantum computing, and data use and skills taking into account synergies with other programs and instruments, in particular Digital Europe Program, widening the scientific and industrial use of supercomputing resources and data applications and fostering the industrial access and use of supercomputing and data infrastructures for innovation adapted to industrial needs; and providing Europe with a knowledgeable leading scientific community and a skilled workforce for scientific leadership and digital transformation of industry, including the support and networking of national High Performance Computing Competence Centres and High Performance Computing Centres of Excellence
- (g) International cooperation: In line with the external policy objectives and international commitments of the Union, defining, implementing and participating in activities relevant to the promotion of international collaboration in supercomputing to solve global scientific and societal challenges, while promoting competitiveness of the European HPC supply and user ecosystem.
- (2) In addition to the activities listed in paragraph 1, the Joint Undertaking may be entrusted with the implementation of additional tasks in the event of cumulative, complementary or combined funding between Union programmes in accordance with the relevant Commission work programme.

Article 5

Union's financial contribution

- (1) The Union financial contribution to the Joint Undertaking including EFTA appropriations shall be up to EUR [XXXXXX], including up to EUR [XXXXXX] for administrative costs, distributed as follows:
- (a) up to EUR [XXXXXX] from Horizon Europe [budget to be determined at a later stage according to the Strategic Planning and Programming of Horizon Europe];
 - (b) up to EUR [2 400 000 000] from the Digital Europe Programme;
 - (c) up to EUR [200 000 000] from the Connecting Europe Facility.
- (2) The Union's financial contribution referred to in paragraph 1 shall be paid from the appropriations in the general budget of the Union allocated to the specific programme.
- (3) Additional Union funds complementing the contribution referred to in paragraph 1 may be allocated to the Joint Undertaking to support activities for the research and innovation and deployment of innovative solutions.

- (4) Contributions from Union programmes corresponding to additional activities entrusted to the Joint Undertaking in accordance with paragraph 3 of this Article shall not be accounted for in the calculation of the Union maximum financial contribution.
- (5) Additional Union funds complementing the contribution referred to in paragraph 1 may be allocated to the Joint Undertaking from the Associated Countries of Horizon Europe, the Digital Europe Programme and the Connecting Europe Facility according to the association agreements.
- (6) The Union's financial contribution referred to in point (a) of paragraph 1 shall be used for the Joint Undertaking to provide financial support to indirect actions as defined in Article xxx of the Horizon Europe Regulation, corresponding to the research and innovation agenda.
- (7) The Union's financial contribution referred to in point (b) of paragraph 1 shall be used for capability building across the whole Union, including the acquisition, and operation of High Performance Computers, quantum computers or quantum simulators, the federation of the High Performance Computing and quantum computing service and data infrastructure and the widening of its use, and the development of advanced skills and training.
- (8) The Union's financial contribution referred to in point (c) of paragraph 1 shall be paid from the appropriations in the general budget of the Union allocated to the Connecting Europe Facility and shall be used for the interconnection of the High Performance Computing and data resources and the creation of an integrated pan-European hyper-connected High Performance Computing and data infrastructure.

Article 6

Other Union contributions

Contributions from Union programmes other than those referred to in Article 5(1) that are part of a Union co-financing to a programme implemented by one of the Participating States shall not be accounted for in the calculation of the Union maximum financial contribution referred to in Article 5.

Article 7

Contributions of members other than the Union

- (1) The Participating States shall make a total contribution of at least equal to the amount of the Union contribution referred to in Article 5 of this Regulation, including up to EUR [XXXXX] contribution for administrative costs [equal to the amount of the Union contribution for administrative costs referred to in Article 5 of this Regulation]. The Participating States shall arrange among them how they will deliver their collective contribution.
- (2) The Private Members of the Joint Undertaking shall make or arrange for their constituent entities and affiliated entities to make contributions for at least EUR [XXXXX] to the Joint Undertaking, including up to EUR [XXXXX] for administrative costs [equal to 22.22 % of the amount of the Union contribution for administrative costs referred to in Article 5 of this Regulation].
- (3) The contributions referred to in paragraphs 1 and 2 of this Article shall consist of contributions as set out in Article 15 of the Statutes.

- (4) The contributions referred to in point (f) of Article 15(3) of the Statutes may be provided by each Participating State to beneficiaries established in that Participating State. Participating States may complement the Joint Undertaking's contribution, within the applicable maximum reimbursement rate set out in Article 30 of Regulation (EU) No xxx establishing Horizon Europe, Article xxx of the Regulation (EU) establishing the Digital Europe Programme and in Article xxx Regulation (EU) No xxx the Connecting Europe Facility. Such contributions shall be without prejudice to state-aid rules.
- (5) The members of the Joint Undertaking other than the Union shall report by 31 January of each year to the Governing Board as defined in Article 15 of the Statutes, on the value of the contributions referred to in paragraphs 1 and 2 of this Article made in the previous financial year.
- (6) For the purpose of valuing the contributions referred to in points (b) to (f) of Article 15(3) of the Statutes, the costs shall be determined in accordance with the usual cost accounting practices of the entities concerned, with the applicable accounting standards of the country where the entity is established and with the applicable International Accounting Standards and International Financial Reporting Standards. The costs shall be certified by an independent external auditor appointed by the entity concerned. The valuation method may be verified by the Joint Undertaking, should there be any uncertainty arising from the certification. If there are remaining uncertainties, the valuation method may be audited by the Joint Undertaking.
- (7) The Commission may terminate, proportionally reduce or suspend the Union financial contribution to the Joint Undertaking or trigger the winding up procedure referred to in Article 24 of the Statutes in the following cases:
 - (a) if the Joint Undertaking fails to meet the conditions for the Union contribution, or
 - (b) if the members other than the Union or their constituent entities or their affiliated entities fail to contribute, contribute only partially, do not respect the time frames with regard to the contribution referred to in paragraphs 1 and 2 of this Article, or
 - (c) as a result of the evaluations referred to in Article 22.

The Commission's decision to terminate, proportionally reduce or suspend the Union financial contribution shall not hinder the reimbursement of eligible costs incurred by the members other than the Union before the decision is notified to the Joint Undertaking.

Article 8

Hosting entity

- (1) EuroHPC supercomputers shall be located in a Participating State that is a Member State. A Participating State shall only host more than one EuroHPC supercomputer if there are more than two years between their acquisition or if they are from differing technologies (classical/quantum).
- (2) For the EuroHPC supercomputers referred to in Articles 10, 11 and 13 of this Regulation, the hosting entity may represent a Participating State that is a Member State or a hosting consortium. The hosting entity and the competent authorities of the

Participating State or Participating States in a hosting consortium shall enter into an agreement to this effect.

- (3) The Joint Undertaking shall entrust to a hosting entity the operation of each individual EuroHPC supercomputer fully owned by the Joint Undertaking, or jointly owned in accordance with Articles 10, 11 and 13 of this Regulation.
- (4) Hosting entities referred to in paragraph 2 of this Article shall be selected in accordance with paragraph 5 of this Article and the Joint Undertaking's financial rules referred to in Article 17 of this Regulation.
- (5) Following a call for expression of interest, the hosting entity referred to in paragraph 2 of this Article and the corresponding Participating State where the hosting entity is established or the corresponding hosting consortium shall be selected by the Governing Board through a fair and transparent process based, inter alia, on the following criteria:
 - (a) compliance with the general system specifications defined in the call for expression of interest;
 - (b) total cost of ownership of the EuroHPC supercomputer, including an accurate estimate and a verification method of the operating costs of this supercomputer during its lifetime;
 - (c) experience of the hosting entity in installing and operating similar systems;
 - (d) quality of the hosting facility's physical and IT infrastructure, its security and its connectivity with the rest of the Union;
 - (e) quality of service to the users, namely capability to comply with the service level agreement provided among the documents accompanying the selection procedure;
 - (f) provision of an appropriate supporting document proving the commitment of the Member State where the hosting entity is established or of the competent authorities of the Participating States of the hosting consortium to cover the share of the total cost of ownership of the EuroHPC supercomputer that is not covered by the Union contribution as set out in Article 5 or any other Union contribution as set out in Article 6, either until its ownership is transferred by the Joint Undertaking to that hosting entity or until the supercomputer is sold or decommissioned if there is no transfer of ownership.
- (6) For the industrial-grade EuroHPC supercomputers referred to in Article 12 of this Regulation, the hosting entity shall associate itself with the Private Members or a consortium of private partners for the acquisition and operation of such supercomputers or partitions of EuroHPC supercomputers. The hosting entity shall enter into an agreement with the Private Members or the consortium of private members to this effect.
 - (a) The Joint Undertaking shall entrust to the hosting entity the operation of each individual industrial-grade EuroHPC supercomputer jointly owned in accordance with Article 12 of this Regulation.
 - (b) Hosting entities shall be selected in accordance with paragraph 5 of this Article and the Joint Undertaking's financial rules referred to in Article 17 of this Regulation.

- (c) Following a call for expression of interest, the hosting entity and its associated Private Members or consortium of private partners shall be selected by the Governing Board through a fair and transparent process based, inter alia, on the criteria set out in paragraph 5(a) to 5(e) of this Article and on the following additional one:

Provision of an appropriate supporting document proving the commitment of the Private Members or of the consortium of private partners to cover the share of the total cost of ownership of the EuroHPC supercomputer that is not covered by the Union contribution as set out in Article 5 or any other Union contribution as set out in Article 6.

- (7) The selected hosting entity may decide to invite, subject to the prior agreement of the European Commission, additional Participating States, or Private Members or a consortium of private partners, to join the hosting consortium. The financial or in-kind contribution or any other commitment of the joining Participating States, or Private Members, shall not affect the Union financial contribution and the corresponding ownership rights and percentage of access time allocated to the Union with regard to that EuroHPC supercomputer as defined in Articles 10, 11, 12, and 13.

Article 9

Hosting agreement

- (1) The Joint Undertaking shall conclude a hosting agreement with each selected hosting entity prior to launching the procedure for the acquisition of a EuroHPC supercomputer.
- (2) The hosting agreement shall address in particular the following elements regarding the EuroHPC supercomputers:
- (a) the rights and obligations during the procedure for acquisition of the supercomputer, including the acceptance tests of the supercomputer;
 - (b) the liability conditions for operating the supercomputer;
 - (c) the quality of service offered to the users when operating the supercomputer, as set out in the service level agreement;
 - (d) the plans regarding the supercomputer's energy efficiency and environmental sustainability;
 - (e) the access conditions of the Union's share of access time to the supercomputer, as decided by the Governing Board in accordance with Article 15;
 - (f) the accounting modalities of the access times;
 - (g) the share of the total cost of ownership that the hosting entity shall arrange to be covered by the Participating State where the hosting entity is established or by the Participating States in the hosting consortium;
 - (h) the conditions for the transfer of ownership referred to in Articles 10(4), 11(5), 12(5) and 13(4), including, in the case of EuroHPC supercomputers, provisions for the calculation of their residual value and for their decommissioning;
 - (i) the obligation of the hosting entity to provide access to the EuroHPC supercomputers, while ensuring the security of the supercomputers, the protection of personal data in accordance with Regulation (EU) 2016/679, the

protection of privacy of electronic communications in accordance with Directive 2002/58/EC, the protection of trade secrets in accordance with Directive (EU) 2016/943 and the protection of confidentiality of other data covered by the obligation of professional secrecy;

- (j) the obligation of the hosting entity to put in place a certified audit procedure covering the costs of operation of the EuroHPC supercomputer and the access times of the users;
 - (k) the obligation of the hosting entity to submit by 31 January of each year to the Governing Board an audit report and data on the use of access time in the previous financial year;
 - (l) the specific conditions applicable when the hosting entity operates an EuroHPC supercomputer for industrial usage.
- (3) The 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 located.
 - (4) The hosting agreement shall contain an arbitration clause, within the meaning of Article 272 TFEU, granting jurisdiction over all matters covered by the agreement to the Court of Justice of the European Union.
 - (5) After the hosting agreement is concluded, and without prejudice to paragraph 2 of this Article, the Joint Undertaking, supported by the selected hosting entity, shall launch the procedures for the acquisition of the EuroHPC supercomputer in accordance with the financial rules of the Joint Undertaking referred to in Article 17.
 - (6) For mid-range supercomputers, after the hosting agreement is concluded, the Joint Undertaking, or the Hosting Entity shall launch on behalf of both contracting parties the procedures for the acquisition of the EuroHPC supercomputer in accordance with the financial rules of the Joint Undertaking referred to in Article 17.

Article 10

Acquisition and ownership of high-end supercomputers

- (1) The Joint Undertaking shall acquire the high-end supercomputers and shall own them.
- (2) The Union financial contribution referred to in Article 5(1) shall cover up to 50% of the acquisition costs plus up to 50% of the operating costs of the high-end supercomputers.

The remaining total cost of ownership of the high-end supercomputers shall be covered by the Participating State where the hosting entity is established or by the Participating States in the hosting consortium, possibly supplemented by the contributions referred to in Article 6.
- (3) The selection of the supplier of the high-end supercomputer shall address the security of the supply chain.
- (4) Without prejudice to the winding up of the Joint Undertaking, as referred to in Article 24(4) of the Statutes, at the earliest five years after the successful acceptance test by the Joint Undertaking of the high-end supercomputers installed in a hosting entity, the ownership of the high-end supercomputer may be transferred to the respective hosting entity, sold to another entity or decommissioned upon decision of

the Governing Board and in accordance with the hosting agreement. In the case of transfer of ownership of a high-end supercomputer, the hosting entity shall reimburse the Joint Undertaking the residual value of the supercomputer that is transferred. If there is no transfer of ownership to the hosting entity but a decision for decommissioning, the relevant costs shall be shared equally by the Joint Undertaking and the hosting entity. The Joint Undertaking shall not be liable for any costs incurred after the transfer of ownership of the high-end supercomputer or after its sale or decommissioning.

Article 11

Acquisition and ownership of quantum computers and quantum simulators

- (1) The Joint Undertaking shall acquire quantum computers and quantum simulators, that could range from pilots and experimental systems to prototypes and operational systems as stand-alone machines or hybridised with high-end or mid-range High Performance Computing machines and accessible via the cloud, and shall own them.
- (2) The Union financial contribution referred to in Article 5(1) shall cover up to 50% of the acquisition costs plus up to 50% of the operating costs of the quantum computers and quantum simulators.

The remaining total cost of ownership of the quantum computers and quantum simulators shall be covered by the Participating State where the hosting entity is established or by the Participating States in the hosting consortium, possibly supplemented by the contributions referred to in Article 6.

- (3) The selection of the supplier of the quantum computers and quantum simulators shall address the security of the supply chain.
- (4) The quantum computers and quantum simulators shall be located in a hosting entity of a EuroHPC supercomputer or a Tier-0 supercomputing centre located in the Union.
- (5) Without prejudice to the winding up of the Joint Undertaking, as referred to in Article 24(4) of the Statutes, at the earliest four years after the successful acceptance test by the quantum computer or quantum simulator installed in a hosting entity, the ownership of the quantum computer or quantum simulator may be transferred to that hosting entity, sold to another entity or decommissioned upon decision of the Governing Board and in accordance with the hosting agreement. In the case of transfer of ownership of a quantum computer or quantum simulator, the hosting entity shall reimburse the Joint Undertaking the residual value of the supercomputer that is transferred. If there is no transfer of ownership to the hosting entity but a decision for decommissioning, the relevant costs shall be shared equally by the Joint Undertaking and the hosting entity. The Joint Undertaking shall not be liable for any costs incurred after the transfer of ownership of the quantum computer or quantum simulator or after its sale or decommissioning.

Article 12

Acquisition and ownership of industrial-grade EuroHPC supercomputers

- (1) The Joint Undertaking shall acquire together with the Private Members, or a consortium of private partners, supercomputers, or partitions of EuroHPC

supercomputers, primarily destined for use by industry, and shall own them or co-own them with the Private Members or a consortium of private partners.

- (2) The Union financial contribution referred to in Article 5(1) shall cover up to 35% of the acquisition costs of the EuroHPC supercomputers, or the partitions of the EuroHPC supercomputers. The remaining total cost of ownership of the EuroHPC supercomputers, or the partitions of the EuroHPC supercomputers, shall be covered by the Private Members, or consortium of private partners.
- (3) The selection of the supplier of an industrial-grade EuroHPC supercomputer shall address the security of the supply chain.
- (4) The EuroHPC supercomputers or the EuroHPC supercomputer partitions for industrial use shall be hosted in a hosting entity of a EuroHPC supercomputer.
- (5) Without prejudice to the winding up of the Joint Undertaking, as referred to in Article 24(4) of the Statutes, at the earliest four years after the successful acceptance test by the Joint Undertaking of the EuroHPC supercomputers installed in a hosting entity, the ownership of the EuroHPC supercomputer may be transferred to the Private Members or the consortium of private partners, sold to another entity or decommissioned upon decision of the Governing Board and in accordance with the Private Members or the consortium of private partners. In the case of transfer of ownership of a EuroHPC supercomputer, the Private Members or the consortium of private partners shall reimburse the Joint Undertaking the residual value of the EuroHPC supercomputer that is transferred. If there is no transfer of ownership to the Private Members or the consortium of private partners but a decision for decommissioning, the relevant costs shall be covered by the Private Members or the consortium of private partners. The Joint Undertaking shall not be liable for any costs incurred after the transfer of ownership of the EuroHPC supercomputer or after its sale or decommissioning.

Article 13

Acquisition and ownership of the mid-range supercomputers

- (1) The Joint Undertaking shall acquire, jointly with the contracting authorities of the Participating State where the hosting entity is established or with the contracting authorities of the Participating States in the hosting consortium, the mid-range supercomputers and shall co-own them.
- (2) The Union financial contribution referred to in Article 5(1) shall cover up to 35% of the acquisition costs of the mid-range supercomputers. The remaining total cost of ownership of the mid-range supercomputers shall be covered by the Participating State where the hosting entity is established or the Participating States in the hosting consortium, possibly supplemented by the contributions referred to in Article 6.
- (3) The selection of the supplier of the mid-range supercomputer shall address the security of the supply chain.
- (4) Without prejudice to the winding up of the Joint Undertaking, as referred to in Article 24(4) of the Statutes, the part of the ownership of the supercomputer owned by the Joint Undertaking shall be transferred to the hosting entity after the full depreciation of the supercomputer. The hosting entity shall reimburse the Joint Undertaking the residual value of the supercomputer that is transferred. The Joint

Undertaking shall not be liable for any costs incurred after the transfer of ownership of the mid-range supercomputer.

Article 14

Use of EuroHPC supercomputers

- (1) The use of EuroHPC supercomputers shall be open to users from the public and private sectors and shall primarily focus on civilian 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.
- (2) The Governing Board shall define the general access conditions for using the EuroHPC supercomputers in accordance with Article 15 and may define specific access conditions for different types of users or applications. The security and quality of service shall be the same for all users within each user category, except for the industrial-grade EuroHPC supercomputers, whose security and quality of service shall be compliant with industrial requirements, in accordance with Article 12(1) of this Regulation.
- (3) Users residing, established or located in a Member State or in a country associated to Horizon 2020 shall be granted access to the Union's share of access time of the supercomputers acquired by the Joint Undertaking established by Council Regulation 2018/1488.
- (4) Users residing, established or located in a Member State or in a country associated to the Digital Europe Programme or to Horizon Europe shall be granted access time to EuroHPC supercomputers acquired after 2020.
- (5) In duly justified cases, taking into account the interests of the Union, the Governing Board shall decide to grant access time to EuroHPC supercomputers to entities residing, established or located in any third country and international organisations.

Article 15

Allocation of Union's access time to the EuroHPC supercomputers

- (1) The share of the Union's access time to each EuroHPC supercomputer shall be directly proportional to the financial contribution of the Union referred to in Article 5(1) to the total cost of ownership of the EuroHPC supercomputer and shall thus not exceed 50% of the total access time of the EuroHPC supercomputer.
- (2) The share of the Union's access time to each mid-range supercomputer shall be directly proportional to the financial contribution of the Union referred to in Article 5(1) to the acquisition cost of the supercomputer and shall not exceed 35% of the total access time of the supercomputer.
- (3) The share of the Union's access time to each industrial-grade EuroHPC supercomputer shall be directly proportional to the financial contribution of the Union referred to in Article 5(1) to the acquisition cost of the supercomputer and shall not exceed 35% of the total access time of the supercomputer.
- (4) Each Participating State where a hosting entity is established or each Participating State in a hosting consortium shall be allocated a share of the remaining access time to each EuroHPC supercomputer. In the case of a hosting consortium, the

Participating States shall agree among themselves the distribution of access time to the supercomputer.

- (5) The Governing Board shall define the access rights to the Union's share of access time to the EuroHPC supercomputers.
- (6) Use of the Union's share of access time to the EuroHPC supercomputers shall be free of charge for the users from the public sector referred to in Article 14(4) of this Regulation. It will also be free of charge for industrial users for applications related to research and innovation activities funded by Horizon Europe or the Digital Europe Programme and for private innovation activities of SMEs, where appropriate. As a guiding principle, allocation of access time for such activities shall be based on a fair and transparent peer review process defined by the Governing Board following continuously open calls for expression of interest launched by the Joint Undertaking.
- (7) With the exception of SME users undertaking private innovation activities, other users shall adopt an open science approach to disseminating knowledge gained through access to the supercomputers of the Joint Undertaking, in accordance with Article xxx of the Horizon Europe Regulation. The Governing Board shall define further the applicable open science rules.
- (8) The Governing Board shall define specific rules for access conditions that depart from the guiding principles referred to in paragraph 6 of this Article. These concern the allocation of access time for projects and activities considered as strategic either by the Union or by the Governing Board.
- (9) Upon request of the Union, the Executive Director shall grant direct access to the EuroHPC supercomputers to initiatives that the Union considers essential for providing health-related or other crucial emergency support services for the public good, to emergency and crisis management situations or to cases that the Union considers essential for its security and defence. The modalities and conditions for the implementation of such access shall be defined in the access conditions adopted by the Governing Board.
- (10) The Governing Board shall define the conditions that shall apply for industrial use to provide access to secure High Performance Computing and data resources for applications other than those specified in paragraph 6 of this Article.
- (11) The Governing Board shall regularly monitor the Union's access time granted per Participating State and per user category, including for commercial purposes. It may decide to:
 - (a) re-adapt access times per category of activity or user, with the aim to optimise the use capabilities of the EuroHPC supercomputers;
 - (b) propose additional support measures for providing fair access opportunities to users that would aim to raise their level of skills and expertise in High Performance Computing systems.

Article 16

Union's access time to EuroHPC supercomputers for commercial purposes

- (1) Specific conditions shall apply to all industry users for commercial purposes. This service for commercial use shall be a pay-per-use service, based on market prices. The level of the fee shall be established by the Governing Board.

- (2) The fees generated by the commercial use of the Union's access time shall constitute revenue to the Joint Undertaking budget and shall be used to cover operational costs of the Joint Undertaking.
- (3) The access time allocated to commercial services shall not exceed 20% of the Union's total access time of each EuroHPC supercomputer. The Governing Board shall decide on the allocation of the Union's access time for the users of commercial services, taking into account the outcome of the monitoring referred to in Article 15(10).
- (4) The quality of commercial services shall be the same for all users.

Article 17

Financial rules

- (1) The Joint Undertaking shall adopt its specific financial rules in accordance with Article 71 of Regulation (EU, Euratom) 2018/1046.
- (2) The financial rules shall be published on the website of the Joint Undertaking.

Article 18

Staff

- (1) The Staff Regulations of Officials and the Conditions of Employment of Other Servants of the European Union laid down in Council Regulation (EEC, Euratom, ECSC) No 259/68⁸ ('Staff Regulations' and 'Conditions of Employment') and the rules adopted jointly by the institutions of the Union for the purpose of applying the Staff Regulations and Conditions of Employment shall apply to the staff of the Joint Undertaking.
- (2) The Governing Board shall exercise, with respect to the staff of the Joint Undertaking, the powers conferred by the Staff Regulations on the Appointing Authority and by the Conditions of Employment on the Authority empowered to conclude contracts ('the appointing authority powers').
- (3) The Governing Board shall adopt, in accordance with Article 110 of the Staff Regulations, a decision based on Article 2(1) of the Staff Regulations and on Article 6 of the Conditions of Employment delegating the relevant appointing authority powers to the Executive Director and defining the conditions under which that delegation may be suspended. The Executive Director shall be authorised to sub-delegate those powers.
- (4) Where exceptional circumstances so require, the Governing Board may by decision temporarily suspend the delegation of the appointing authority powers to the Executive Director and any subsequent sub-delegation of those powers by the latter. In such cases, the Governing Board shall exercise the appointing authority powers itself or shall delegate them to one of its members or to a staff member of the Joint Undertaking other than the Executive Director.

⁸ Regulation (EEC, Euratom, ECSC) No 259/68 of the Council of 29 February 1968 laying down the Staff Regulations of Officials and the Conditions of Employment of Other Servants of the European Communities and instituting special measures temporarily applicable to officials of the Commission (OJ L 56, 4.3.1968, p. 1).

- (5) The Governing Board shall adopt appropriate implementing rules giving effect to the Staff Regulations and the Conditions of Employment in accordance with Article 110 of the Staff Regulations.
- (6) The staff resources shall be set out in the staff establishment plan of the Joint Undertaking, indicating the number of temporary posts by function group and by grade, as well as by the number of contract staff expressed in full-time equivalents, in accordance with its annual budget.
- (7) The staff of the Joint Undertaking shall consist of temporary staff and contract staff.
- (8) All costs related to staff shall be borne by the Joint Undertaking.

Article 19

Seconded national experts and trainees

- (1) The Joint Undertaking may make use of seconded national experts and trainees not employed by the Joint Undertaking. The number of seconded national experts expressed in full-time equivalents shall be added to the information on staff resources as referred to in Article 18(4) in accordance with the annual budget.
- (2) The Governing Board shall adopt a decision laying down rules on the secondment of national experts to the Joint Undertaking and on the use of trainees.

Article 20

Privileges and Immunities

Protocol No 7 on the privileges and immunities of the European Union, annexed to the Treaty on European Union and the Treaty on the Functioning of the European Union, shall apply to the Joint Undertaking and its staff.

Article 21

Liability of the Joint Undertaking

- (1) The contractual liability of the Joint Undertaking shall be governed by the relevant contractual provisions and by the law applicable to the agreement, decision or contract in question.
- (2) In the case of non-contractual liability, the Joint Undertaking shall, in accordance with the general principles common to the laws of the Member States, make good any damage caused by its staff in the performance of their duties.
- (3) Any payment by the Joint Undertaking in respect of the liability referred to in paragraphs 1 and 2, and the costs and expenses incurred in that connection, shall be considered as expenditure of the Joint Undertaking and shall be covered by its resources.
- (4) The Joint Undertaking shall be solely responsible for meeting its obligations.
- (5) The Joint Undertaking shall not be held liable for any damage resulting from the actions of the hosting entity regarding the operation by the hosting entity of the supercomputers it owned by the former.

Monitoring and evaluation

- (1) The activities of the Joint Undertaking shall be subject to continuous monitoring and periodic reviews in accordance with its financial rules, to ensure 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.
- (2) The Joint Undertaking shall organise continuous monitoring of its management activities and periodic reviews of the outputs, results and impacts of the projects implemented in line with Article 45 and Annex III of Regulation (EU) No xxx establishing Horizon Europe.
- (3) Evaluations of the Joint Undertakings' operations shall be carried out in a timely manner to feed into the overall interim and final evaluations of Horizon Europe and the related decision-making process as specified in Article 47 of Regulation (EU) No xxx establishing Horizon Europe.
- (4) The Commission shall carry out an interim evaluation of each Joint Undertaking as part of the Horizon Europe interim evaluation, as specified in Article 47 of Regulation (EU) No xxx establishing Horizon Europe. This evaluation shall be performed with the assistance of independent experts on the basis of a transparent process once there is sufficient information available about the implementation of Horizon Europe, but no later than four years after the start of Horizon Europe implementation. The evaluations shall examine how the Joint Undertaking fulfils its mission according to its economic, technological, scientific, societal and policy objectives, including climate-related objectives, and evaluate the effectiveness, efficiency, relevance, coherence, and Union added value of its activities as part of Horizon Europe, 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. The evaluations shall, where relevant, also include an assessment of the long-term scientific, societal, economic and policy-relevant impact of the Joint Undertaking and shall include an assessment of the most effective policy intervention mode for any future action, as well as the positioning of any possible renewal of the Joint Undertaking in the overall European Partnerships landscape and its policy priorities.
- (5) On the basis of the conclusions of the interim evaluation referred to in paragraph 1 of this Article, the Commission may act in accordance with Article 7(7) or take any other appropriate action.
- (6) The Commission may carry out further evaluations of themes or topics of strategic relevance, with the assistance of external independent experts selected on the basis of a transparent process, to examine the progress made by the Joint Undertaking towards the objectives set, identify the factors contributing to the implementation of the activities and identify best practices. By carrying out those further evaluations, the Commission shall fully consider the administrative impact on the Joint Undertaking.
- (7) The Joint Undertaking shall perform periodic reviews of its activities to inform the interim and final evaluations of the Joint Undertaking as part of Horizon Europe

evaluations referred to in Article 47 of Regulation (EU) No xxx establishing Horizon Europe.

- (8) Periodic reviews and evaluations shall inform the winding up or possible renewal of the Joint Undertaking, in line with Annex III of Regulation (EU) No xxx establishing Horizon Europe. Within six months after the winding-up of the Joint Undertaking, but no later than two years after the triggering of the winding-up procedure referred to in Article 24 of the Statutes, the Commission shall conduct a final evaluation of the Joint Undertaking. The results of that final evaluation shall be presented to the European Parliament and to the Council.
- (9) The Commission shall communicate the results of the evaluations of the Joint Undertaking, which shall include conclusions of the evaluation and observations by the Commission, to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions as part of the Horizon Europe evaluations referred to in Article 47 of Regulation (EU) No xxx establishing Horizon Europe.

Article 23

Jurisdiction of the Court of Justice of the European Union and applicable law

- (1) The Court of Justice of the European Union shall have jurisdiction:
 - (a) pursuant to any arbitration clause contained in agreements or contracts concluded by the Joint Undertaking, or in its decisions;
 - (b) in disputes relating to compensation for damage caused by the staff of the Joint Undertaking in the performance of their duties;
 - (c) in any dispute between the Joint Undertaking and its staff within the limits and under the conditions laid down in the Staff Regulations or the Conditions of Employment.
- (2) Regarding any matter not covered by this Regulation or by other Union legal acts, the law of the Member State where the seat of the Joint Undertaking is located shall apply.

Article 24

Complaints to the Ombudsman

Decisions taken by the Joint Undertaking in implementing this Regulation may form the subject of a complaint to the Ombudsman in accordance with Article 228 TFEU.

Article 25

Ex-post audits

- (1) Ex-post audits of expenditure on actions funded by the Horizon Europe budget shall be carried out in accordance with Article 48 of Regulation (EU) No xxx establishing Horizon Europe as part of the Horizon Europe indirect actions, in particular in line with the audit strategy referred to in Article 48(2) of that Regulation.

- (2) Ex-post audits of expenditure on activities funded by the Digital Europe budget shall be carried out by the Joint Undertaking in accordance with Article xxx of Regulation (EU) No xxx establishing Digital Europe Programme.
- (3) Ex-post audits of expenditure on activities funded by the Connecting Europe Facility budget shall be carried out by the Joint Undertaking in accordance with Article xxx of Regulation (EU) No xxx establishing Connecting Europe Facility as part of the Connecting Europe Facility actions.

Article 26

Protection of the financial interests of the members

- (1) The Joint Undertaking shall grant Commission staff and other persons authorised by the respective Joint Undertaking or the Commission, as well as the Court of Auditors, access to its sites and premises and to all the information, including information in electronic format, needed in order to conduct their audits.
- (2) The European Anti-Fraud Office (OLAF) and the European Public Prosecutor's Office (EPPO) may 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 2185/96⁹ and Regulation (EC, Euratom) No 883/2013 of the European Parliament and of the Council¹⁰ and with a view to establishing whether there has been fraud, corruption or any other illegal activity affecting the financial interests of the Union in connection with an agreement, a decision or a contract funded under this Regulation.
- (3) Without prejudice to paragraphs 1 and 2, agreements, decisions and contracts resulting from the implementation of this Regulation shall contain provisions expressly empowering the Commission, the respective Joint Undertaking, the Court of Auditors, the EPPO and OLAF to conduct such audits, on-the spot checks and investigations in accordance with their respective competences.
- (4) The Joint Undertaking shall ensure that the financial interests of its members are adequately protected by carrying out or commissioning appropriate internal and external controls.
- (5) The Joint Undertaking shall accede to the Interinstitutional Agreement of 25 May 1999 between the European Parliament, the Council and the Commission concerning internal investigations by the European Anti-Fraud Office (OLAF).¹¹ The Joint Undertaking shall adopt the necessary measures needed to facilitate internal investigations conducted by OLAF.

Article 27

Confidentiality

⁹ 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).

¹⁰ 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).

¹¹ OJ L 136, 31.5.1999, p. 15.

The Joint Undertaking shall ensure the protection of sensitive information the disclosure of which could damage the interests of its members or of participants in the activities of the Joint Undertaking.

Article 28

Transparency

Regulation (EC) No 1049/2001 of the European Parliament and of the Council¹² shall apply to documents held by the Joint Undertaking.

Article 29

Processing of personal data

Where the implementation of this Regulation requires the processing of personal data, they shall be processed in accordance with Regulation (EU) 2018/1725 of the European Parliament and of the Council.¹³

Article 30

Access to results and information on proposals

- (1) The Joint Undertaking shall provide the Union institutions and Union bodies, offices or agencies access to all information related to the indirect actions it funds. Such information shall include results of beneficiaries participating in indirect actions of the Joint Undertaking or any other information deemed necessary for developing, implementing, monitoring and evaluating Union policies or programmes. Such access rights are limited to non-commercial and non-competitive use and shall comply with applicable confidentiality rules.
- (2) For the purposes of developing, implementing, monitoring and evaluating Union policies or programmes, the Joint Undertaking shall provide the European Commission with information included in submitted proposals.

Article 31

Rules for participation and dissemination applicable to indirect actions funded under Horizon Europe

Regulation (EU) No xxx establishing Horizon Europe shall apply to the indirect actions funded by the Joint Undertaking under Horizon Europe. In accordance with that Regulation, the Joint Undertaking shall be considered as a funding body and shall provide financial support to indirect actions as set out in Article 1 of the Statutes.

Regulation (EU) No xxx establishing Horizon Europe shall also apply to the indirect actions funded by the Participating State contributions referred to in point (f) of Article 15(3) of the Statutes.

¹² Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents (OJ L 145, 31.5.2001, p. 43).

¹³ Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39).

Article 32

Rules applicable to the activities funded under the Connecting Europe Facility

Regulation (EU) No xxx establishing the Connecting Europe Facility shall apply to the activities funded by the Joint Undertaking under the Connecting Europe Facility.

Article 33

Rules applicable to the activities funded under the Digital Europe Programme

Regulation (EU) No xxx establishing Digital Europe Programme shall apply to the activities funded by the Joint Undertaking under Digital Europe Programme.

Article 34

Support from the host Member State

An administrative agreement may be concluded between the Joint Undertaking and the Member State where its seat is located concerning privileges and immunities and other support to be provided by that State to the Joint Undertaking.

Article 35

Repeal

- (1) Without prejudice to actions initiated under Regulation (EU) No 2018/1488 including annual implementation plans and financial obligations related to those actions, Regulation (EU) No 2018/1488 is hereby repealed.

As regards the actions initiated under Articles 10, 11, 13 and 14 of Regulation (EU) No 2018/1488, as well as Articles 6 and 7 of the Statutes annexed to that Regulation shall continue to apply until their completion and to the extent necessary.

Actions arising from calls for proposals and call for tenders provided for in annual implementation plans adopted under Regulation (EC) No 2018/1488 shall also be regarded as actions initiated under that Regulation.

- (2) All references to Regulation (EU) No 2018/1488 shall be understood as references to this Regulation.

Article 36

Transitional provisions

- (1) This Regulation shall not affect the rights and obligations of staff engaged under Regulation (EC) No 2018/1488.
- (2) To this effect the employment contracts of staff shall continue under this Regulation in accordance with the Staff Regulations and Conditions of Employment.
- (3) The Executive Director appointed under Regulation (EU) No 2018/1488 shall, for the remaining period of term of office, be assigned to the functions of Executive Director as provided for in this Regulation with effect from the entry into force of this Regulation. The other conditions of contract shall remain unchanged.

- (4) Unless otherwise agreed between members all rights and obligations including assets, debts or liabilities of the members held pursuant to Regulation (EU) No 2018/1488 shall be transferred to the members pursuant to this Regulation.
- (5) In its first meeting after the entry into force of this Regulation, the Governing Board of the Joint Undertaking shall adopt a list of decisions adopted under Regulation (EU) No 2018/1488 that shall continue to apply under this Regulation. Any unused appropriations under Regulation 2018/1488 shall be transferred to the EuroHPC Joint Undertaking established under this Regulation.
- (6) All rights and obligations including assets, debts or liabilities of the Joint Undertaking and any unused appropriations under Regulation (EU) No 2018/1488 shall be transferred to the EuroHPC Joint Undertaking established under this Regulation.

Article 37

Entry into force

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,

For the Council
The President



Brussels, 18.9.2020
COM(2020) 569 final

ANNEX 1

ANNEX

to the

Proposal for a Council Regulation

on establishing the European High Performance Computing Joint Undertaking

{SWD(2020) 179 final}

STATUTES OF THE EUROPEAN HIGH PERFORMANCE COMPUTING JOINT UNDERTAKING

Article 1

Tasks

The Joint Undertaking shall carry out the following tasks:

- (a) mobilise public and private sector funds for the financing of the activities of the Joint Undertaking;
- (b) support the implementation of the mission, the objectives and the pillars of activities of the Joint Undertaking listed in Articles 3 and 4 of this Regulation. These activities will be funded by the Union's budget stemming from Regulation (EU) xxx establishing Horizon Europe, Regulation (EU) xxx establishing Digital Europe Programme and Regulation (EU) xxx establishing the Connecting Europe Facility in accordance with the scope of their respective Regulations and by contributions from the relevant Participating States to the Joint Undertaking; to this purpose the Joint Undertaking shall launch calls for proposals, calls for tenders, and any other instrument or procedure provided for in Horizon Europe, the Digital Europe Programme, and the Connecting Europe Facility;
- (c) initiate and manage the calls for expression of interest for hosting EuroHPC supercomputers and evaluate the offers received, with the support of independent external experts;
- (d) select the hosting entity of the EuroHPC supercomputers in a fair, open and transparent manner, in accordance with Article 8 of this Regulation;
- (e) conclude a hosting agreement in accordance with Article 9 of this Regulation with the hosting entity for the operation and maintenance of the EuroHPC supercomputers and monitor the contractual compliance with the hosting agreement, including the acceptance test of the acquired supercomputers;
- (f) define general and specific conditions for allocating the Union's share of access time to the EuroHPC supercomputers and monitor access to these supercomputers in accordance with Article 15 of this Regulation;
- (g) ensure the contribution of its operations to the achievement of the objectives of Horizon Europe, the strategic multiannual planning, reporting, monitoring and evaluation and other requirements of that programme such as the implementation of the common policy feedback framework;
- (h) initiate open calls for proposals and award funding in accordance with Regulation (EU) xxx establishing Horizon Europe, and within the limits of available funds, to indirect actions, mainly in the form of grants;
- (i) initiate open calls for proposals and calls for tenders and award funding in accordance with Regulation xxx (EU) establishing Digital Europe Programme and Regulation (EU) xxx establishing the Connecting Europe Facility within the limits of available funds;
- (j) monitor the implementation of the actions and manage grant agreements and procurement contracts;

- (k) ensure the efficiency of the European High Performance Computing initiative, based on a set of appropriate measures;
- (l) monitor overall progress towards achieving the objectives of the Joint Undertaking;
- (m) develop close cooperation and ensure coordination with Union and national activities, bodies and stakeholders, creating synergies and improving exploitation of research and innovation results in the area of High Performance Computing;
- (n) develop close cooperation and ensure coordination with other European Partnerships, as well as operational synergies with other Joint Undertakings, including through centralisation of administrative functions;
- (o) define the multiannual strategic programme, draw up and implement the corresponding annual work programmes for their execution and make any necessary adjustments to the multiannual strategic programme;
- (p) engage in information, communication, exploitation and dissemination activities by applying *mutatis mutandis* Article 46 of Regulation (EU) No xxx establishing Horizon Europe, including making the detailed information on results from calls for proposals available and accessible in a common Horizon Europe e-database;
- (q) any other task needed to achieve the objectives set out in Article 3 of this Regulation.

Article 2

Members

- (1) The members of the Joint Undertaking shall be:
 - (a) the Union, represented by the Commission;
 - (b) Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, [Montenegro], the Netherlands, [North Macedonia], Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, [Switzerland], [Turkey];
 - (c) upon acceptance of these Statutes by means of a letter of commitment, the European Technology Platform for High Performance Computing (ETP4HPC) Association registered under Dutch law with its registered office in Amsterdam (the Netherlands), the Big Data Value Association (BDVA) registered under Belgian law with its registered office in Brussels (Belgium).
 - (d) Each Participating State shall appoint its representative in the Governing Board of the Joint Undertaking and shall designate the national entity or entities responsible for fulfilling its obligations under this Regulation.

Article 3

Changes to membership

- (1) Provided that they contribute in accordance with Article 7 of this Regulation or to the financing referred to in Article 15 of these Statutes to achieve the mission and

objectives of the Joint Undertaking set out in Article 3 of this Regulation, Member States or countries associated to Horizon Europe or the Digital Europe Programme that are not listed in point (b) of Article 2(1) of these Statutes may apply to become members of the Joint Undertaking.

- (2) Any application of a Member State or 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, as well as their contribution to the administrative costs of the Joint Undertaking. The candidates shall also provide their motivation for requesting membership to the Joint Undertaking and indicate how their national supercomputing 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 of the candidature before endorsing the application.
- (3) Provided that it contributes to the financing referred to in Article 15 of these Statutes to achieve the mission and objectives of the Joint Undertaking set out in Article 3 of this Regulation, and accept these Statutes, any legal entity that is not listed in point (c) of Article 2(1) of the Statutes and is established in a Member State that directly or indirectly supports research and innovation in a Member State may apply to become a Private Member of the Joint Undertaking in accordance with paragraph 4 of this Article.
- (4) Any application for membership to become a Private Member of the Joint Undertaking made in accordance with paragraph 3 of this Article shall be addressed to the Governing Board. The Governing Board shall assess the application, taking into account the relevance and the potential added value of the applicant as regards the achievement of the mission and objectives of the Joint Undertaking and shall decide on the application.
- (5) Any member may terminate its membership in the Joint Undertaking. Such termination shall become effective and irrevocable six months after notification to the Executive Director, who shall inform the other members of the Governing Board and the Private Members. As from the date of termination, the former member shall be discharged from any obligations other than those approved or incurred by the Joint Undertaking prior to the notification of termination of the membership.
- (6) Each Private Member shall inform the Joint Undertaking once per year of any significant changes in the composition of the Private Member. Where the Commission considers that the change in composition is likely to affect the Union's or the Joint Undertaking's interest on grounds of security or public order, it may propose to the Governing Board to terminate the membership of the concerned Private Member. The termination shall become effective and irrevocable within six months of the decision of the Governing Board or on the date specified in that decision, whichever is earlier.
- (7) Membership in the Joint Undertaking may not be transferred to a third party without the prior agreement of the Governing Board.

- (8) Upon any change to membership pursuant to this Article, the Joint Undertaking shall immediately publish on its website an updated list of members together with the date of such change.

Article 4

Bodies of the Joint Undertaking

- (1) The bodies of the Joint Undertaking shall be:
- (a) the Governing Board;
 - (b) the Executive Director;
 - (c) the Industrial and Scientific Advisory Board composed of the Research and Innovation Advisory Group and the Infrastructure Advisory Group.
- (2) When carrying out its tasks, each body of the Joint Undertaking shall only pursue the objectives set out in this Regulation and shall only act within the scope of the activities of the Joint Undertaking for the purpose of which it was established.

Article 5

Composition of the Governing Board

- (1) The Governing Board shall be composed of representatives of the Commission, on behalf of the Union, and of the Participating States.
- (2) The Commission and each Participating State shall appoint one representative in the Governing Board.

Article 6

Functioning of the Governing Board

- (1) The representatives of the members of the Governing Board shall make every effort to achieve consensus. Failing consensus, a vote shall be held.
- (2) The Union shall hold 50% of the voting rights. The voting rights of the Union shall be indivisible.
- (3) For the tasks referred to in Article 7(3) of these Statutes, the remaining 50% of the voting rights shall be distributed equally among all Participating States.

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.

- (4) For the tasks referred to in Article 7(4) of these Statutes, except points (f), (g) and (h), the remaining 50% of the voting rights shall be held by the Participating States that are Member States.

For the purpose of this paragraph, decisions of the Governing Board shall be taken by a qualified majority. Qualified majority shall be deemed established if it represents the Union and at least 55% of the Participating States that are Member States, comprising at least 65% of the total population of these States. To determine

the population, the figures set out in Annex III to Council Decision 2009/937/EU¹ shall be used.

- (5) For those tasks referred to in Article 7(4) points (f), (g) and (h) of these Statutes, and for each EuroHPC supercomputer, 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 supercomputer until either its ownership is transferred to the hosting entity in accordance with Article 8(3) of this Regulation or until it is sold or decommissioned; 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.

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

At the first stage, the remaining 50% of the voting rights shall be distributed equally among all Participating States. Decisions of the Governing Board shall be taken by a majority consisting of the Union's vote and at least 55% of all votes of the Participating States, including the votes of the members who are absent.

At the second stage, the Governing Board shall decide by the qualified majority referred to in paragraph 4 of this Article.

- (7) Without prejudice to the previous paragraphs, countries that were members of the Joint Undertaking under Council Regulation 2018/1488 and contributed to the acquisition or operation of the supercomputers acquired by the Joint Undertaking (under that Regulation), but which no longer are members of the present Joint Undertaking, shall maintain voting rights limited exclusively to decisions relating to those supercomputers in accordance with Articles 6(5) and 7(5) of the Statutes of the European High Performance Computing Joint Undertaking annexed to Council Regulation 2018/1488.

- (8) The Governing Board shall elect a chair for a period of two years. The mandate of the chairperson may be extended only once, following a decision by the Governing Board.

- (9) The vice chair of the Governing Board shall be the representative of the Commission.

- (10) The Governing Board shall hold its ordinary meetings at least twice a year. It may hold extraordinary meetings at the request of the Commission, of a majority of the representatives of the Participating States, at the request of the chair, or at the request of the Executive Director in accordance with Article 15(5) of these Statutes. The meetings of the Governing Board shall be convened by its chair and shall usually take place at the seat of the Joint Undertaking.

The Executive Director shall have the right to attend the meetings and take part in the deliberations but shall have no voting rights. The Governing Board may invite, on a case-by-case basis, other persons to attend its meetings as observers.

¹ Council Decision 2009/937/EU of 1 December 2009 adopting the Council's Rules of Procedure (OJ L 325, 11.12.2009, p. 35).

Each observer State may appoint one delegate in the Governing Board, who shall receive all relevant documents and may participate in the deliberations of the Governing Board unless decided otherwise by the Governing Board on a case-by-case basis. Those delegates shall have no voting rights and shall ensure the confidentiality of sensitive information according to Article 27 of this Regulation and subject to the rules of conflict of interest.

- (11) The representatives of the members shall not be personally liable for any actions they have taken in their capacity as representatives on the Governing Board.
- (12) The Governing Board shall adopt and publish its own rules of procedure. Those rules shall include specific procedures for identifying and avoiding conflicts of interest and ensure the confidentiality of sensitive information.
- (13) The chairs of the Research and Innovation Advisory Group and of the Infrastructure Advisory Group of the Joint Undertaking shall be invited, whenever issues falling within their tasks are discussed, to attend meetings of the Governing Board as observers and take part in its deliberations, but shall have no voting rights.
- (14) The chairs of the Private Members of the Joint Undertaking shall be invited to attend the meetings of the Governing Board as observers and take part in its deliberations, but shall have no voting rights.

Article 7

Tasks of the Governing Board

- (1) The Governing Board shall have overall responsibility for the strategic orientation and the operations of the Joint Undertaking and shall supervise the implementation of its activities. It shall ensure that the principles of fairness and transparency are properly applied in the allocation of public funding.
- (2) The Commission, in its role in the Governing Board, shall seek to ensure coordination between the activities of the Joint Undertaking and the relevant activities of Union funding programmes with a view to promoting synergies when developing an integrated supercomputing and data infrastructure ecosystem and when identifying priorities covered by collaborative research.
- (3) The Governing Board shall, in particular, carry out the following general administrative tasks of the Joint Undertaking:
 - (a) assess, accept or reject applications for membership in accordance with Article 3(2) of these Statutes;
 - (b) decide on the termination of membership in the Joint Undertaking of any member that does not fulfil its obligations;
 - (c) adopt the financial rules of the Joint Undertaking in accordance with Article 17 of this Regulation;
 - (d) adopt the annual administrative budget of the Joint Undertaking, including the corresponding staff establishment plan indicating the number of temporary posts by function group and by grade, the number of contract staff and seconded national experts expressed in full-time equivalents;
 - (e) appoint, dismiss, extend the term of office of, provide guidance to and monitor the performance of the Executive Director;

- (f) approve the consolidated annual activity report, including the corresponding expenditure referred to in Article 19(1) of these Statutes;
 - (g) exercise the powers of appointing authority with respect to staff in accordance with Article 18 of this Regulation;
 - (h) where appropriate, establish implementing rules to the Staff Regulations and the Conditions of Employment in accordance with Article 18(3) of this Regulation;
 - (i) where appropriate, lay down rules on the secondment of national experts to the Joint Undertaking and on the use of trainees in accordance with Article 19(2) of this Regulation;
 - (j) where appropriate, set up advisory groups in addition to the bodies of the Joint Undertaking referred to in Article 4 of these Statutes;
 - (k) approve the organisational structure of the Programme Office upon recommendation of the Executive Director;
 - (l) where appropriate, submit to the Commission a request to amend this Regulation proposed by a member of the Joint Undertaking;
 - (m) define the general and specific access conditions to use the Union's share of access time of the EuroHPC supercomputers, in accordance with Article 15 of this Regulation;
 - (n) establish the level of the fee of the commercial services referred to in Article 16 of this Regulation, and decide on the allocation of the access time for those services;
 - (o) approve the Joint Undertaking's communication policy upon recommendation by the Executive Director;
 - (p) be responsible for any task that is not specifically allocated to a particular body of the Joint Undertaking; it may assign such tasks to any body of the Joint Undertaking.
- (4) The Governing Board shall, in particular, carry out the following tasks related to the acquisition and operation of the EuroHPC supercomputers and generated revenues referred to in Article 14 of this Regulation:
- (a) adopt the multiannual strategic programme for the acquisition of EuroHPC supercomputers referred to in Article 19(1) of these Statutes;
 - (b) adopt the part of the annual work programme that is related to the acquisition of EuroHPC supercomputers and the selection of hosting entities and the corresponding expenditure estimates referred to in Article 19(2) of these Statutes;
 - (c) approve the launch of calls for expression of interest, in accordance with the annual work programme;
 - (d) approve the selection of the hosting entities for the EuroHPC supercomputers selected through a fair, open and transparent process in accordance with Article 8 of this Regulation;
 - (e) decide annually on the use of any revenue generated by the fees for commercial services referred to in Article 16 of this Regulation;

- (f) approve the launch of calls for tenders, in accordance with the annual work programme;
 - (g) approve the tenders selected for funding;
 - (h) decide on the possible transfer of ownership of the EuroHPC supercomputers to a hosting entity, their sale to another entity or their decommissioning, in accordance with Articles 10(4), 11(5) and 13(4) of this Regulation;
 - (i) decide on the possible transfer of ownership of the EuroHPC supercomputers to the Private Members or a consortium of private partners, their sale to another entity or their decommissioning, in accordance with Article 12(5) of this Regulation.
- (5) The Governing Board shall, in particular, carry out the following tasks related to the research and innovation activities, as well as the data use and skills activities of the Joint Undertaking:
- (a) adopt the strategic research and innovation agenda referred to in Article 19(1) of these Statutes at the beginning of the initiative and amend it throughout the duration of the Horizon Europe, if necessary; the Strategic Research and Innovation agenda shall identify, inter alia, the other European partnerships with which the Joint Undertaking shall establish a formal and regular collaboration, as well as possibilities for synergies between the Joint Undertaking's actions and national or regional initiatives and policies based on information received by the Participating States;
 - (b) adopt the part of the annual work programme that is related to the research and innovation activities and the corresponding expenditure estimates referred to in Article 19(2) of these Statutes to implement the strategic research and innovation agenda, including the content of the calls for proposals, the applicable funding rate per call topic, as well as the related rules for submission, evaluation, selection, award and review procedures;
 - (c) take due account of the agreements referred to in Article 16(3) of the Statutes when adopting the expenditure estimates of the related research and innovation activities in order to ensure the principle of equilibrium of the budget of the Joint Undertaking;
 - (d) approve the launch of calls for proposals, in accordance with the annual work programme;
 - (e) approve the list of actions selected for funding on the basis of the recommendation of the Executive Director;
 - (f) be responsible for the close and timely monitoring of the progress of the Joint Undertaking's research and innovation programme and individual actions in relation to the priorities of the Commission and the strategic research and innovation agenda and take corrective measures where needed to ensure that the Joint Undertaking meets its objectives.
- (6) The Governing Board shall, in particular, carry out the following tasks related to the capability building and widening activities of the Joint Undertaking:
- (a) adopt the multiannual strategic programme referred to in Article 19(1) of these Statutes;

- (b) adopt the part of the annual work programme that is related to the capability building and widening activities and the corresponding expenditure estimates referred to in Article 19(2) of these Statutes;
 - (c) approve the launch of calls for proposals and calls for tender, in accordance with the annual work programme;
 - (d) approve the list of actions selected for funding on the basis of the recommendation of the Executive Director.
- (7) The Governing Board shall, in particular, carry out the following tasks related to the federation and connectivity of the High Performance Computing and data infrastructure activities, as well as the international cooperation activities of the Joint Undertaking:
- (a) adopt the multiannual strategic programme referred to in Article 19(1) of these Statutes;
 - (b) adopt the part of the annual work programme that is related to the federation and connectivity and to the international cooperation activities and the corresponding expenditure estimates referred to in Article 19(2) of these Statutes;
 - (c) approve the launch of calls for proposals and calls for tender, in accordance with the annual work programme;
 - (d) approve the list of actions selected for funding on the basis of the recommendation of the Executive Director.

Article 8

Appointment, dismissal or extension of the term of office of the Executive Director

- (1) The Commission shall propose a list of candidates for Executive Director after consultation of the members other than the Union of the Joint Undertaking. For the purpose of such consultation the members other than the Union of the Joint Undertaking shall appoint by common accord their representatives as well as an observer on behalf of the Governing Board.
- The Executive Director shall be appointed by the Governing Board from a list of candidates proposed by the Commission following an open and transparent selection procedure.
- (2) The Executive Director shall be a member of staff and shall be engaged as a temporary agent of the Joint Undertaking under point (a) of Article 2 of the Conditions of Employment.
- For the purpose of concluding the contract of the Executive Director, the Joint Undertaking shall be represented by the chair of the Governing Board.
- (3) The term of office of the Executive Director shall be four years. By the end of that period, the Commission, associating the members other than the Union as appropriate, shall undertake an assessment of the performance of the Executive Director and the Joint Undertaking's future tasks and challenges.
- (4) The Governing Board, acting on a proposal from the Commission which takes into account the assessment referred to in paragraph 3, may extend the term of office of the Executive Director once, for a period of no more than four years.

- (5) An Executive Director whose term of office has been extended may not participate in another selection procedure for the same post at the end of the overall period.
- (6) The Executive Director may be dismissed only upon a decision of the Governing Board pursuant to point (e) of Article 7(3) of these Statutes acting on a proposal from the Commission associating the members other than the Union as appropriate.
- (7) The Commission may designate a Commission official to act as interim Executive Director and exercise the duties assigned to the Executive Director for any period that the position of Executive Director is vacant.

Article 9

Tasks of the Executive Director

- (1) The Executive Director shall be the chief executive responsible for the day-to-day management of the Joint Undertaking in accordance with the decisions of the Governing Board.
- (2) The Executive Director shall be the legal representative of the Joint Undertaking. The Executive Director shall be accountable to the Governing Board and perform his or her duties with complete independence within the powers assigned to him or her.
- (3) The Executive Director shall implement the budget of the Joint Undertaking.
- (4) The Executive Director shall carry out, in particular, the following tasks in an independent manner:
 - (a) consolidate and submit for adoption to the Governing Board the draft multiannual strategic programme referred to in Article 19(1) of these Statutes;
 - (b) prepare and submit to the Governing Board for adoption the draft annual budget, including the corresponding staff establishment programme indicating the number of temporary posts in each grade and function group and the number of contract staff and seconded national experts expressed in full-time equivalents;
 - (c) prepare and submit to the Governing Board for adoption the draft annual work programme including the scope of the calls for proposals, calls for expression of interest and calls for tenders needed to implement the research and innovation activities programme, the procurement programme, the capability building and widening activities programme and the federation, connectivity and international cooperation activities programme, as proposed by the Industrial and Scientific Advisory Board, and the corresponding expenditure estimates, as proposed by the Participating States and the Commission;
 - (d) submit for opinion to the Governing Board the annual accounts;
 - (e) prepare and submit for approval to the Governing Board the consolidated annual activity report, including the information on corresponding expenditure;
 - (f) sign individual grant agreements, contracts and decisions in his or her remit on behalf of the Joint Undertaking; ;
 - (g) sign procurement contracts;
 - (h) monitor the operations of the EuroHPC supercomputers owned or funded by the Joint Undertaking, including the allocation of the Union's share of access

time, compliance with the access rights for academic and industrial users and quality of provided services;

- (i) propose to the Governing Board the Joint Undertaking's communication policy;
 - (j) organise, direct and supervise the operations and the staff of the Joint Undertaking within the limits of the delegation by the Governing Board as provided for in Article 18(2) of this Regulation;
 - (k) establish and ensure the functioning of an effective and efficient internal control system and report any significant change to it to the Governing Board;
 - (l) ensure that risk assessment and risk management are performed;
 - (m) arrange, as appropriate, for the establishment of an internal audit capability of the Joint Undertaking;
 - (n) allocate access time for emergencies and crisis management, in agreement with the access policy defined by the Governing Board.
 - (o) take any other measures needed to assess the progress of the Joint Undertaking towards its objectives as set out in Article 3 of this Regulation;
 - (p) perform any other tasks entrusted or delegated to the Executive Director by the Governing Board.
- (5) The Executive Director shall set up a Programme Office for the execution, under his or her responsibility, of all support tasks arising from this Regulation. The Programme Office shall be composed of the staff of the Joint Undertaking and shall in particular carry out the following tasks:
- (a) provide support in establishing and managing an appropriate accounting system in accordance with the financial rules referred to in Article 17 of this Regulation;
 - (b) manage the calls for proposals as provided for in the annual work programme and administer the grant agreements and decisions;
 - (c) manage the calls for tenders as provided for in the annual work programme and administer the contracts;
 - (d) manage the process for the selection of the hosting entities and administer the hosting agreements;
 - (e) provide the members and the other bodies of the Joint Undertaking with all relevant information and support necessary for them to perform their duties, as well as respond to their specific requests;
 - (f) act as the secretariat of the bodies of the Joint Undertaking and provide support to advisory groups set up by the Governing Board.

Article 10

Composition of the Industrial and Scientific Advisory Board

- (1) The Industrial and Scientific Advisory Board shall be composed of a Research and Innovation Advisory Group and an Infrastructure Advisory Group.

- (2) The Research and Innovation Advisory Group shall consist of no more than ten members, which shall be appointed by the Private Members taking into account their commitments to the Joint Undertaking.
- (3) The Infrastructure Advisory Group shall consist of ten members. The Governing Board shall establish the specific criteria that will be considered for selecting the members of the Infrastructure Advisory Group. The Chair and Vice Chair of the Governing Board shall appoint the members of the Infrastructure Advisory Group, following inputs received from the Governing Board and the Executive Director.
- (4) The Research and Innovation Advisory Group and the Infrastructure Advisory Group shall meet at least together once a year in order to coordinate their activities.

Article 11

Functioning of the Research and Innovation Advisory Group

- (1) The Research and Innovation Advisory Group shall meet at least twice a year.
- (2) The Research and Innovation Advisory Group may appoint working groups where necessary under the overall coordination of one or more members.
- (3) The Research and Innovation Advisory Group shall elect its chair.
- (4) The Research and Innovation 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.

Article 12

Functioning of the Infrastructure Advisory Group

- (1) The Infrastructure Advisory Group shall meet at least twice a year.
- (2) The Infrastructure Advisory Group may appoint working groups where necessary under the overall coordination of one or more members.
- (3) The Infrastructure Advisory Group shall elect its chair.
- (4) The Infrastructure 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.

Article 13

Tasks of the Research and Innovation Advisory Group

The Research and Innovation Advisory Group shall:

- (a) draw up and regularly update the draft multiannual strategic programme referred to in Article 19(1) of these Statutes for achieving the objectives of the Joint Undertaking set out in Article 3 of this Regulation. This draft multiannual strategic programme shall include: i) the strategic research and innovation agenda identifying the research and innovation priorities for the development and adoption of technologies and key competences for High Performance Computing and quantum computing across different application areas in order to support the development of an integrated High Performance Computing, quantum computing and data ecosystem in the Union, increase its resilience

and help create new markets and societal applications, and measures to promote the development and uptake of European technology; ii) potential international cooperation activities in research and innovation that add value and are of mutual interest; iii) training and education priorities for addressing the skills gap in High Performance Computing and Quantum Computing technologies and applications, in particular for industry. It shall be reviewed regularly in accordance with the evolution of the scientific and industrial demand;

- (b) submit to the Executive Director the draft multiannual strategic research and innovation agenda as a basis for drafting the annual work programme within the deadlines set by the Governing Board;
- (c) organise public consultations open to all public and private stakeholders having an interest in the fields of High Performance Computing and quantum computing, to inform them about and collect feedback on the draft multiannual strategic programme and the draft research and innovation activities programme, the international cooperation activities programme and the training and education programme for a given year.

Article 14

Tasks of the Infrastructure Advisory Group

The Infrastructure Advisory Group shall provide advice to the Governing Board for the acquisition and operation of the EuroHPC supercomputers. For this purpose, it shall:

- (a) draw up and regularly update the draft multiannual strategic programme referred to in Article 19(1) of these Statutes for achieving the objectives of the Joint Undertaking set out in Article 3 of this Regulation. The draft multiannual strategic programme shall address: i) the acquisition of the EuroHPC supercomputers taking into account inter alia, the planning of the acquisition, the needed capacity increases, the types of applications and user communities to be addressed, the relevant user requirements and appropriate system architectures, the user requirements, and the architecture of the infrastructure; ii) the federation and interconnection of this infrastructure, taking into account inter alia, the integration with national High Performance Computing or quantum computing infrastructures, and the architecture of the hyper-connected and federated infrastructure; and iii) the capability building, including the Competence Centres and widening and training activities for end-users, as well as opportunities for promoting the take-up and use of European technology solutions notably by the Competence Centres;
- (b) submit to the Executive Director the draft multiannual strategic programme for the acquisition of the EuroHPC supercomputers as a basis for drafting the annual work programme within the deadlines set by the Governing Board;
- (c) organise public consultations open to all public and private stakeholders having an interest in the field of High Performance Computing, including quantum computing, to inform them about and collect feedback on the draft multiannual strategic programme for the acquisition and operation of the EuroHPC supercomputers and the related draft activities of the work programme for a given year.

Article 15

Sources of financing

- (1) The Joint Undertaking shall be jointly funded by its members through financial contributions paid in instalments and in-kind contributions as set out in paragraphs (2) and (3).
- (2) The administrative costs of the Joint Undertaking shall not exceed EUR [equal to 2.22 times of the amount of the Union contribution for administrative costs referred to in Article 5 of this Regulation] and shall be covered by means of the financial contributions referred to in Articles 5(1), 7(1) and 7(2) of this Regulation.

The contribution of each Participating State to the administrative costs of the Joint Undertaking shall be proportional to their Gross Domestic Product. Each year the contributions shall be calculated based on the GDP of the previous calendar year as determined by EUROSTAT.

If part of the contribution for administrative costs is not used, it may be made available to cover the operational costs of the Joint Undertaking.

- (3) The operational costs of the Joint Undertaking shall be covered by means of:
 - (a) the Union's financial contribution;
 - (b) financial contributions by the Participating State where the hosting entity is established or by the Participating States in a hosting consortium to the Joint Undertaking for the acquisition of the high-end EuroHPC supercomputers or quantum machines and for their operation until their ownership is transferred to the hosting entity, they are sold or decommissioned in accordance with Articles 10(4) and 11(5) of this Regulation, less the contributions by the Joint Undertaking and any other Union contribution to those costs;
 - (c) in-kind contributions by the Participating State where the hosting entity is established or by the Participating States in a hosting consortium as defined in Article 8(7) of this Regulation;
 - (d) financial contributions by the Participating State where the hosting entity is established or by the Participating States in a hosting consortium consisting of the costs incurred for the acquisition, jointly with the Joint Undertaking, of the mid-range EuroHPC supercomputers, less the contributions by the Joint Undertaking and any other Union contribution to those costs;
 - (e) financial contributions by the Private Members or a consortium of private partners consisting of the costs incurred for the acquisition and operation, jointly with the Joint Undertaking, of the industrial-grade EuroHPC supercomputers, less the contributions by the Joint Undertaking and any other Union contribution to those costs, until their ownership is transferred to the hosting entity, they are sold or decommissioned in accordance with Article 13(5) of this Regulation;
 - (f) financial contributions by Participating States to the eligible costs incurred by beneficiaries established in that Participating State in implementing indirect actions corresponding to the research and innovation agenda as a complement to the reimbursement of these costs made by the Joint Undertaking, less the contributions by the Joint Undertaking and any other Union contribution to those costs. Such contributions shall be without prejudice to state-aid rules;

- (g) in-kind contributions by the Private Members or their constituent entities and affiliated entities as defined in Article 8(7) of this Regulation;
- (4) The resources of the Joint Undertaking entered in its budget shall be composed of the following contributions:
 - (a) members' financial contributions to the administrative costs;
 - (b) members' financial contributions to the operational costs;
 - (c) any revenue generated by the Joint Undertaking;
 - (d) any other financial contributions, resources and revenues.
 - (e) Any interest yielded by the contributions paid to the Joint Undertaking shall be considered to be its revenue.
 - (5) Should any member of the Joint Undertaking be in default of its commitments concerning its financial contribution, the Executive Director shall put this in writing and shall set a reasonable period within which such default shall be remedied. If the situation is not remedied within that period, the Executive Director shall convene a meeting of the Governing Board to decide whether the defaulting member's membership is to be revoked or whether any other measures are to be taken until its obligations have been met. The defaulting member's voting rights shall be suspended until the default of its commitments is remedied.
 - (6) The resources and activities of the Joint Undertaking shall be intended for the achievement of the objectives set out in Article 3 of this Regulation.
 - (7) The Joint Undertaking shall own all assets generated by it or transferred to it for the achievement of its objectives set out in Article 3 of this Regulation. This shall not include the EuroHPC supercomputers whose ownership the Joint Undertaking has transferred to a hosting entity in accordance with Articles 10(4), 11(5), 12(5) and 13(4) of this Regulation.
 - (8) Except when the Joint Undertaking is wound up, any excess revenue over expenditure shall not be paid to the members of the Joint Undertaking.

Article 16

Contributions of the Participating States

- (1) Participating States shall entrust the Joint Undertaking with the implementation of their contributions to the participants of their country in indirect actions as referred to in Article 15(3)(f) of these Statutes through the grant agreements concluded by the Joint Undertaking. They shall also entrust the Joint Undertaking with the payment of their contributions to the participants. They shall specify the amounts dedicated to indirect actions.
- (2) The beneficiaries of indirect actions of the Joint Undertaking shall sign a single grant agreement with the Joint Undertaking. Detailed rules of the grant agreement, including the respective framework for intellectual property rights, shall follow the rules of the respective Union programme supporting the corresponding grant activity.
- (3) Participating States shall commit to the payment of the full amount of their contributions referred to in Article 15(3)(f) of these Statutes by means of legally binding agreements between the entities designated by the Participating States for that purpose and the Joint Undertaking. Such agreements shall be concluded ahead of

the adoption of the part of the annual work programme related to the research and innovation activities.

- (4) Other arrangements for the cooperation between the Participating States and the Joint Undertaking and for the commitments regarding the contributions mentioned in paragraph 1 shall be established by means of agreements to be concluded between the entities designated by the Participating States for that purpose and the Joint Undertaking.

Article 17

Financial commitments

The financial commitments of the Joint Undertaking shall not exceed the amount of financial resources available or committed to its budget by its members. The Commission might provide multi-annual commitments.

Article 18

Financial year

The financial year shall run from 1 January to 31 December.

Article 19

Operational and financial planning

- (1) The multiannual strategic programme shall specify the strategy and plans for achieving the objectives of the Joint Undertaking set out in Article 3 of this Regulation. The multiannual strategic programme shall be drafted by the Industrial and Scientific Advisory Board and shall include the following: the strategic research and innovation agenda, the capability building and widening activities, the federation, connectivity and international cooperation activities, and the acquisition of supercomputers. It will also include the multiannual financial perspectives received from the Participating States and the Commission.
- (2) The Executive Director shall submit to the Governing Board for adoption a draft annual work programme which shall include the research and innovation activities, the procurement activities, the capability building and widening activities, the federation and connectivity activities, the international cooperation activities, the administrative activities and the corresponding expenditure estimates for the following year. The Executive Director shall also submit to the Governing Board the agreements referred to in Article 16(3) of the Statutes supporting the expenditure estimates of the related research and innovation activities.
- (3) The annual work programme shall be adopted by the end of the year prior to its implementation. The annual work programme shall be made publicly available.
- (4) The Executive Director shall prepare the draft annual budget for the following year and shall submit it to the Governing Board for adoption.
- (5) The annual budget for a particular year shall be adopted by the Governing Board by the end of the year prior to its implementation.
- (6) The annual budget shall be adapted in order to take into account the amount of the Union's financial contribution as set out in the general budget of the Union.

Article 20

Operational and financial reporting

- (1) The Executive Director shall report annually to the Governing Board on the performance of his or her duties in accordance with the financial rules of the Joint Undertaking referred to in Article 17 of this Regulation. The consolidated annual activity report shall include, inter alia, information on the following matters:
 - (a) research, innovation and other actions carried out and the corresponding expenditure;
 - (b) acquisition and operation of infrastructure, including the use of and access to the infrastructure, including the access time effectively used by each Participating State;
 - (c) the proposals and tenders submitted, including a breakdown by participant type, including SMEs, and by country;
 - (d) the indirect actions selected for funding, with a breakdown by participant type, including SMEs, and by country, and indicating the contributions of the Joint Undertaking to the individual participants and actions;
 - (e) the tenders selected for funding, with a breakdown by type of contractor, including SMEs, and by country, and indicating the contributions of the Joint Undertaking to the individual contractors and procurement actions;
 - (f) the outcome of the procurement activities;
 - (g) progress towards the achievement of the objectives set out in Article 3 of this Regulation and proposals for further necessary work to achieve these objectives.
- (2) The accounting officer of the Joint Undertaking shall send the provisional accounts to the Commission's accounting officer and the Court of Auditors in accordance with the financial rules of the Joint Undertaking.
- (3) The Executive Director shall send the report on the budgetary and financial management to the European Parliament, the Council and the Court of Auditors in accordance with the financial rules of the Joint Undertaking.
- (4) The discharge procedure shall be carried out in accordance with the financial rules of the Joint Undertaking.

Article 21

Internal audit

- (1) The Commission's internal auditor shall exercise the same powers over the Joint Undertaking as those exercised in respect of the Commission.
- (2) The Joint Undertaking shall be capable of performing its own internal audit.

Article 22

Liability of members and insurance

- (1) The financial liability of the members of the Joint Undertaking for the debts of the Joint Undertaking shall be limited to their contributions already made to the administrative costs.

- (2) The Joint Undertaking shall take out and maintain appropriate insurance.

Article 23

Conflict of interest

- (1) The Joint Undertaking, its bodies and staff shall avoid any conflict of interest in carrying out their activities.
- (2) The Governing Board shall adopt rules for the prevention and management of conflicts of interest in respect of the persons serving in the Governing Board and in the other bodies or groups of the Joint Undertaking.

Article 24

Winding-up

- (1) The Joint Undertaking shall be wound up at the end of the period laid down in Article 1 of this Regulation.
- (2) In addition to paragraph 1 the winding-up procedure shall be automatically triggered if the Union or all members other than the Union withdraw from the Joint Undertaking.
- (3) For the purpose of conducting the proceedings to wind up the Joint Undertaking, the Governing Board shall appoint one or more liquidators, who shall comply with the decisions of the Governing Board.
- (4) When the Joint Undertaking is being wound up, its assets shall be used to cover its liabilities and the expenditure relating to its winding-up. The supercomputers owned by the Joint Undertaking shall be transferred to the respective hosting entities or Private Members or consortium of private partners, sold or decommissioned upon decision of the Governing Board and in accordance with the hosting agreement. The members of the Joint Undertaking shall not be liable for any costs incurred after the transfer of ownership of a supercomputer or its sale or decommissioning. In the event of transfer of ownership, the hosting entity or Private Members or the consortium of private partners shall reimburse the Joint Undertaking the residual value of the supercomputers that are transferred. Any surplus shall be distributed among the members at the time of the winding-up in proportion to their financial contribution to the Joint Undertaking. Any such surplus distributed to the Union shall be returned to the general budget of the Union.
- (5) An *ad hoc* procedure shall be set up to ensure the appropriate management of any agreement concluded or decision adopted by the Joint Undertaking, as well as any procurement contract with a duration longer than the duration of the Joint Undertaking.

[ANNEX \[...\]](#)

[ANNEX \[...\]](#)



Brussels, 18.9.2020
COM(2020) 569 final

ANNEX 2 – PART 1/2

ANNEX

to the

PROPOSAL FOR A COUNCIL REGULATION

on establishing the European High Performance Computing Joint Undertaking

{SWD(2020) 179 final}

LEGISLATIVE FINANCIAL STATEMENT

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LEGISLATIVE FINANCIAL STATEMENT

1. FRAMEWORK OF THE PROPOSAL/INITIATIVE

1.1. Title of the proposal/initiative

Council Regulation on establishing the European High Performance Computing Joint Undertaking

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

Research and Innovation & European Strategic Investments
(Advanced Computing - Horizon Europe Cluster 4, Digital, Industry and Space
High Performance Computing – DEP Strategic Objective 1)

1.3. The proposal/initiative relates to:

- a new action
- a new action following a pilot project/preparatory action¹
- the extension of an existing action
- a merger or redirection of one or more actions towards another/a new action

1.4. Grounds for the proposal/initiative

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

The aims of the EuroHPC JU are 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; support the production of innovative and competitive supercomputing 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; widen the use of this supercomputing infrastructure to a large number of public and private users, and support the development of key skills for European science and industry.

1.4.2. Added value of Union involvement

The added value of union involvement includes:

- Increasing the level of funding in HPC at European level in a single and coordinated effort with Member/Participating States.
- Enhanced coordination and pooling of EU and national investments (based on SRIA)
- Rationalised implementation of national and EU investments and programmes, contributing to increasing the overall HPC investments in Europe
- Providing the EU with the best supercomputers in the world, which could not be acquired by single Participant States alone.

¹ As referred to in Article 58(2)(a) or (b) of the Financial Regulation.

- Facilitating European Institutions/users access to the best supercomputer resources in Europe

The EuroHPC will dramatically increase the computing power supply for EU users, contribute to provide an independent European source of key technologies changing the landscape of the European supply ecosystem, and foster and widen the use of HPC across the EU

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

The existing EuroHPC JU has already acquired solid working experience, with extensive discussions of the stakeholders on the governance, administration and other operational and implementation aspects from which the following main lessons learnt so far can be summarised as follows:

- Simplification of the co-funding scheme: The combination of EU and national funds in the different EuroHPC activities needs to be simplified and optimised.
- More flexibility in defining the acquisition time and technology of new supercomputing systems
- More flexibility in the resource allocation of the EuroHPC systems.
- Well-defined access policies for the industrial/commercial use of the EuroHPC infrastructure that would enable the full exploitation of the EuroHPC capabilities in either pre-competitive research access, or in commercial terms of use
- A clearer framework for collaboration with relevant stakeholders: PRACE and GEANT. Specific arrangements may need to be established with PRACE for the tasks related to the allocation of the access time to the JU's systems, and with GEANT for procuring dedicated connectivity for the EuroHPC supercomputers.
- A better definition of the different contributions to the activities of EuroHPC. For example, there is a need to further define the in-kind contributions of the Participating States and of the Private Members to the EuroHPC JU; and to better define the costs that EuroHPC can/cannot support for the acquisition and operations of supercomputers.
- More flexibility in the contribution of Private Members and other private actors to the activities of the EuroHPC JU

1.4.4. *Compatibility and possible synergy with other appropriate instruments*

Synergies in Horizon Europe (H-E)

Successor to ECSEL Joint Undertaking
Big Data, Robotics & AI
Quantum Technologies FET Flagship
EOSC

Synergies in DEP

AI
Cybersecurity
Advanced digital skills

1.5. Duration and 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.

1.6. Management mode(s) planned²

Direct management by the Commission

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

Shared management with the Member States

Indirect management by entrusting budget implementation tasks to:

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

Comments

² Details of management modes and references to the Financial Regulation may be found on the BudgWeb site:
<https://myintracomm.ec.europa.eu/budgweb/EN/man/budgmanag/Pages/budgmanag.aspx>

2. MANAGEMENT MEASURES

2.1. Monitoring and reporting rules

Specify frequency and conditions.

The activities of the Joint Undertaking will be 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 carry out an interim evaluation with the assistance of independent experts based on a transparent process no later than four years after the start of Horizon Europe implementation. The evaluation will 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.

The evaluations will also include an assessment of the long-term scientific, societal, economic and policy-relevant impact of the Joint Undertaking and will include an assessment of the most effective policy intervention mode for any future action, as well as the positioning of any possible renewal of the Joint Undertaking in the overall European Partnerships landscape and its policy priorities.

2.2. Management and control system(s)

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

The 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 154 of Regulation (EU, Euratom) No 1046/2018, 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 Framework Programme as part of the Horizon Europe Framework Programme indirect actions.

In order to protect the financial interests of the Union, the Commission will in compliance with the Financial Regulation supervise the activities of the 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 is incorrect payment of expenditure to participants in indirect actions and incorrect implementation of the procurements of the EuroHPC supercomputers. The financial management will follow the Financial Regulation of the Joint Undertaking implementing the respective administrative and financial processes of the respective funding programs (i.e. Horizon Europe, Digital Europe, Connecting Europe Facility-2), including making use of the common IT tools.

The specific risk of conflicts of interest inherent to a Public-Private Partnership is addressed by a clear separation of decision powers between the Governing Board – setting the strategy and the work plans, determining the conditions for the calls for proposals and the calls for tender and deciding on the allocation of public funding.

Insufficient contributions from the Participating States puts at risk the acquisition or operation of the pre-exascale supercomputers, either the contributions are insufficient to acquire the supercomputers, to operate them over their economic lifecycle, or the contributions are insufficient to acquire supercomputers with a performance level that would rank them among the top three in the world. A procurement by the EuroHPC Joint Undertaking will only be launched when a firm commitment of the Participating States is received as part of the eligibility criteria in the call for expression of interest for hosting an EuroHPC supercomputer, covering the total cost of ownership.

In accordance with the Horizon Europe Regulation, Participating States should entrust the Joint Undertaking with the implementation of their contribution to their national participants in indirect actions. To safeguard the Union's interests, the Participating States and the Joint Undertaking should conclude legally binding agreements committing Participating States to the payment of the full amount of their contribution to indirect actions throughout the lifetime of the initiative. Such agreements should be concluded in the context of the annual budgetary procedure and programming of the Joint Undertaking. Only after that and in line with the Joint Undertaking's financial rules, the authorising officer should make the budgetary and legal commitments for those indirect actions.

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

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

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

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 European Anti-fraud Office (OLAF) and the European Public Prosecutor's Office (EPPO) may 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 2185/96³ and Regulation (EC, Euratom) No 883/2013 of the European Parliament and of the Council⁴, 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.

3. ESTIMATED FINANCIAL IMPACT OF THE PROPOSAL/INITIATIVE

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

Heading of multiannual financial framework	Budget line	Type of expenditure	Contribution			
	Heading 1 Single Market, Innovation and Digital – Horizon Europe	Diff./Non-diff. ⁵	from EFTA countries ⁶	from candidate countries ⁷	from third countries	within the meaning of Article [21(2)(b)] of the Financial Regulation
1 - Single Market, Innovation and Digital	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					
	02 04 02 11 01 – DEP - High-Performance Computing joint undertaking (EuroHPC) Support expenditure					
	02 04 02 11 02 – DEP - High-Performance Computing joint undertaking (EuroHPC) Operational expenditure					
	02 03 03 - CEF Digital					

³ 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).

⁴ 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).

⁵ Diff. = Differentiated appropriations / Non-diff. = Non-differentiated appropriations.

⁶ EFTA: European Free Trade Association.

⁷ Candidate countries and, where applicable, potential candidates from the Western Balkans.

Commitment appropriations (EUR million to three decimal places)

budget line	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025	Year 2026	Year 2027	Post 2027	TOTAL
01 02 02 42 01 – HE - Cluster Digital, Industry and Space — High-Performance Computing joint undertaking (EuroHPC) Support expenditure ⁸	p.m.		p.m.						
01 02 02 42 02 – HE - Cluster Digital, Industry and Space — High-Performance Computing joint undertaking (EuroHPC) Operational expenditure	p.m.		p.m.						
02 04 02 11 01 – DEP - High-Performance Computing joint undertaking (EuroHPC) Support expenditure	2,017	3,149	3,660	3,733	3,808	3,884	9,748		30,000
02 04 02 11 02 – DEP - High-Performance Computing joint undertaking (EuroHPC) Operational expenditure	397,983	386,851	396,340	146,267	296,192	346,116	400,251		2.370,000
02 03 03 - CEF Digital	10,000	20,000	40,000	70,000	20,000	20,000	20,000		200,000
Total expenditure	410,000	410,000	440,000	220,000	320,000	370,000	430,000		2.600,000

⁸ The HE contribution cannot be indicated at this stage. The following tables of this Financial Statement indicate only contributions related to DEP and CEF. It is intended that HE contribution will be commensurate to the current annual contribution to EuroHPC.

3.2. Estimated impact on expenditure

3.2.1. Summary of estimated impact on expenditure

EUR million (to three decimal places)

Heading of multiannual financial framework	1	1 - Single Market, Innovation and Digital
---	----------	---

Joint Undertaking ⁹¹⁰¹¹			2021	2022	2023	2024	2025	2026	2027 ¹²	Post 2027	TOTAL
Title 1	Commitments	(1)	0,402	1,434	1,911	1,949	1,988	2,028	6,205		15,917
	Payments	(2)	0,402	1,434	1,911	1,949	1,988	2,028	2,068	4,137	15,917
Title 2	Commitments	(1a)	1,615	1,715	1,749	1,784	1,820	1,856	3,544		14,083
	Payments	(2a)	1,615	1,715	1,749	1,784	1,820	1,856	1,894	1,650	14,083
Title 3	Commitments	(3a)	407,983	406,851	436,340	216,267	316,192	366,116	420,251		2.570,000
	Payments	(3b)	122,000	225,000	350,000	185,000	290,000	345,000	400,000	653,000	2.570,000
TOTAL appropriations for Joint Undertaking	Commitments	=1+1a +3a	410,000	410,000	440,000	220,000	320,000	370,000	430,000	-	2.600,000
	Payments	=2+2a +3b	124,017	228,149	353,660	188,733	293,808	348,884	403,962	658,787	2.600,000

⁹ This table includes the EU contribution from DEP and CEF Digital Programmes only.

¹⁰ Amounts in Titles 1 and 2 represent the EU contribution to the administrative costs of the Joint Undertaking. The other remaining part comes from contributions by the other Joint Undertaking members as shown in section 3.2.5.

¹¹ Payment appropriations for Titles 1 and 2 are based on a yearly consumption of all corresponding commitment appropriations, while for Title 3 they are determined by taking into account the nature of the indirect actions and their payment schedule (prefinancing, interim payments and payment of the balance).

¹² Titles 1 and 2 for year 2027 contain the commitments for the year and the frontloading of the commitments for the remaining years of the JU in the period 2027-2033.

EUR million (to three decimal places)

		2021	2022	2023	2024	2025	2026	2027	<i>Post 2027</i>	TOTAL
Human Resources		p.m	p.m							
Other administrative expenditure		p.m	p.m							
TOTAL DG	Appropriations	p.m	p.m							

EUR million (to three decimal places)

		2021	2022	2023	2024	2025	2026	2027	<i>Post 2027</i>	TOTAL
TOTAL appropriations for the envelope of the Programme - Heading 1¹³ of the multiannual financial framework	Commitments	410,000	410,000	440,000	220,000	320,000	370,000	430,000	-	2.600,000
	Payments	124,017	228,149	353,660	188,733	293,808	348,884	403,962	658,787	2.600,000

Heading of multiannual financial framework	7	‘Administrative expenditure’
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¹³ The appropriations required for human resources and other expenditure of an administrative nature outside Heading 7 correspond to the amounts covered by the Union financial contribution. The above amounts do not include the contribution from Member States to the administrative costs of the Competence Centre, commensurate to the Union financial contribution.

EUR million (to three decimal places)

DG CNECT (4 FTE STATUTORY AD, 2 FTE AC)		2021	2022	2023	2024	2025	2026	2027	Post 2027	TOTAL
Human resources ¹⁴		0,760	0,760	0,760	0,760	0,760	0,760	0,760	p.m	5,320
Other administrative expenditure		p.m	p.m							
TOTAL appropriations under HEADING 7 of the multiannual financial framework	(Total commitments = Total payments)	0,760	0,760	0,760	0,760	0,760	0,760	0,760	p.m	5,320

EUR million (to three decimal places)

		2021	2022	2023	2024	2025	2026	2027	Post 2027	TOTAL
TOTAL appropriations across HEADINGS of the multiannual financial framework	Commitments	410,760	410,760	440,760	220,760	320,760	370,760	430,760		2.605,320
	Payments	124,777	228,909	354,420	189,420	294,568	349,644	404,722	658,787	2.605,320

¹⁴ Covering the administration of DEP and CEF Digital actions. The FTE costs are determined on the basis of the average yearly cost of AD (EUR 150 000) and CA (EUR 80 000) staff.

3.2.2. Estimated impact on JU's human resources

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

Staffing numbers (in headcounts / FTE)

	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025	Year 2026	Year 2027	Post 2027	TOTAL
Officials (AD Grades)									
Officials (AST grades)									
Contract staff	20	25	30	30	30	30	30		
Temporary staff	14	22	27	27	27	27	27		
Seconded National Experts									
TOTAL	34	47	57	57	57	57	57		

EUR million (to three decimal places)

	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025	Year 2026	Year 2027	Post 2027	TOTAL
Officials (AD Grades)									
Officials (AST grades)									
Contract staff	1,019	1,624	1,988	2,028	2,069	2,110	2,152	4,304	17,294
Temporary staff	1,148	2,863	3,584	3,656	3,729	3,804	3,880	7,759	30,423
Seconded National Experts									
TOTAL	2,168	4,488	5,572	5,684	5,798	5,914	6,032	12,063	47,717

Estimated impact on the staff (additional FTE) – establishment plan¹⁵

Function group and grade	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Post 2031
AD16												
AD15												
AD14												
AD13												
AD12												
AD11												
AD10												
AD9												
AD8												
AD7												
AD6												
AD5												
AD Total	14	22	27	27	27	27	27					
AST11												
AST10												
AST9												
AST8												
AST7												
AST6												
AST5												
AST4												
AST3												
AST2												
AST1												
AST Total												
AST/SC 6												
AST/SC 5												
AST/SC 4												
AST/SC 3												
AST/SC 2												
AST/SC 1												
AST/SC Total												

Estimated impact on the staff (additional) – external personnel

Contract agents	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Post 2031
Function group IV												
Function group III												
Function group II												

¹⁵ The JU staffing table includes also 16 FTE for the HE related part. These staff numbers related to this part remain stable as compared to the current EUR HPC staffing (16 FTE) and will cover also the implementation of the legacy of the current EUR HPC JU.

Function group I												
Total	20	25	30	30	30	30	30					

Seconded national experts	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Post 2031
Total												

3.2.3. Estimated requirements of human resources Commission

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

Estimate to be expressed in full time equivalent units

Years		2021	2022	2023	2024	2025	2026	2027
• Establishment plan posts (officials and temporary staff)								
Headquarters and Commission's Representation Offices		4	4	4	4	4	4	4
Delegations								
Research								
• External staff (in Full Time Equivalent unit: FTE) - AC, AL, END, INT and JED ¹⁶								
Heading 7								
Financed from HEADING 7 of the multiannual financial framework	- at Headquarters	2	2	2	2	2	2	2
	- in Delegations							
Financed from the envelope of the programme ¹⁷	- at Headquarters							
	- in Delegations							
Research								
Other (specify)								
TOTAL		6						

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

Description of tasks to be carried out:

Officials and temporary staff	
External staff	

¹⁶ AC= Contract Staff; AL = Local Staff; END = Seconded National Expert; INT = agency staff; JPD= Junior Professionals in Delegations.

¹⁷ Sub-ceiling for external staff covered by operational appropriations (former 'BA' lines).

3.2.4. *Third-party contributions*¹⁸

The proposal/initiative:

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

– Appropriations in EUR million (to three decimal places)

	Year 2021	Year 2022	Year 2023	Year 2024	Year 2025	Year 2026	Year 2027	Post 2027	TOTAL
Financial contribution to the administrative costs of JU covered by the Participant States	2,295	3,175	3,175	3,175	3,175	3,175	3,175	8,655	30,000
Financial contributions to the administrative costs by the Private members/Associated Partners (Art 22.3.b SBA)	0,000	0,000	1,000	1,000	1,000	1,000	1,000	1,000	6,000
Financial contributions to operational costs by the Participating States	407,705	406,825	436,825	216,825	316,825	366,825	418,170	0,00	2 570,000
In kind contributions to operational activities by the Private members/Associated Partners (Art 22.3.d SBA)									
In kind contributions to operational activities by Participating States									
TOTAL appropriations co-financed	410,000	410,000	441,000	221,000	321,000	371,000	422,345	9,655	2 606,000

¹⁸ The Third-party contributions will have to be updated to reflect the effect of additional contributions from the Horizon Europe programme

3.3. Estimated impact on revenue

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

please indicate, if the revenue is assigned to expenditure lines

EUR million (to three decimal places)

Budget revenue line:	Impact of the proposal/initiative ¹⁹						
	2021	2022	2023	2024	2025	2026	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).

¹⁹ 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.



Brussels, 18.9.2020
COM(2020) 569 final

ANNEX 2 – PART 2/2

ANNEX

to the

PROPOSAL FOR A COUNCIL REGULATION

on establishing the European High Performance Computing Joint Undertaking

{SWD(2020) 179 final}

ANNEX
to the LEGISLATIVE FINANCIAL STATEMENT

Name of the proposal/initiative:

EuroHPC Joint Undertaking

1. Cost of human resources considered necessary	2
2. Cost of other administrative expenditure	6
3. Methods of calculation used to estimate costs	9
1. Human resources	9
2. Other administrative expenditure	10

*This annex, **to be completed by each DGs/Services participating to the proposal/initiative**, must accompany the legislative financial statement when the inter-services consultation is launched.*

The data tables are used as a source for the tables contained in the legislative financial statement. They are strictly for internal use within the Commission.

Budget data of an administrative nature

1. COST OF HUMAN RESOURCES CONSIDERED NECESSARY

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

EUR million (to three decimal places)

HEADING 7 of the multiannual financial framework		2021		2022		2023		2024		2025		2026		2027		TOTAL	
		FTE	Appropriations	FTE	Appropriations												
• Establishment plan posts (officials and temporary staff)																	
Headquarters and Commission's Representation Offices	AD	4	0.600	4	0.600	4	0.600	4	0.600	4	0.600	4	0.600	4	0.600	4	4.200
	AST																
in Union Delegations	AD																
	AST																
• External staff¹																	
Global envelope	AC	2	0.160	2	0.160	2	0.160	2	0.160	2	0.160	2	0.160	2	0.160	2	1.120
	END																
	INT																
in Union Delegations	AC																
	AL																

¹ AC = Contract Staff; AL = Local Staff; END = Seconded National Expert; INT= agency staff; JPD= Junior Professionals in Delegations.

Budget data of an administrative nature

	END																
	INT																
	JPD																
Other budget lines (<i>specify</i>)																	
Subtotal – HEADING 7 of the multiannual financial framework			0.760		0.760		0.760		0.760		0.760		0.760		0.760		5.320

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

Budget data of an administrative nature

Outside HEADING 7 of the multiannual financial framework		2021		2022		2023		2024		2025		2026		2027		TOTAL		
		FTE	Appropriations	FTE	Appropriations	FTE	Appropriations	FTE	Appropriations	FTE	Appropriations	FTE	Appropriations	FTE	Appropriations	FTE	Appropriations	
Establishment plan posts (officials and temporary staff)																		
Research	AD																	
	AST																	
External staff ²																		
External staff from operational appropriations former 'BA' lines).	- at Headquarters	AC	20	1.019	25	1.624	30	1.988	30	2.028	30	2.069	30	2.110	30	2.152	12.990	
		END																
		TA	14	1.148	22	2.863	27	3.384	27	3.656	27	3.729	27	3.804	27	3.880	22.664	
	- in Union delegations	AC																
		AL																
		END																
		INT																
		JPD																
	Research	AC																
		END																
INT																		
Other budget lines (specify)																		

² AC = Contract Staff; AL = Local Staff; END = Seconded National Expert; INT= agency staff; JPD= Junior Professionals in Delegations.

Budget data of an administrative nature

Subtotal – Outside HEADING 7			2.168		4.488		5.572		5.684		5.798		5.914		6.032		35.654
of the multiannual financial framework																	

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

Budget data of an administrative nature

2. COST OF OTHER ADMINISTRATIVE EXPENDITURE

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

EUR million (to three decimal places)

HEADING 7 of the multiannual financial framework	2021	2022	2023	2024	2025	2026	2027	Total
<u>At headquarters:</u>								
Mission and representation expenses								
Conference and meeting costs								
Committees ³								
Studies and consultations								
Information and management systems								
ICT equipment and services ⁴								
Other budget lines (<i>specify where necessary</i>)								
Information and publishing								
Acquisition, renting and related expenditure								

³ Specify the type of committee and the group to which it belongs.

⁴ ICT: Information and Communication Technologies; DIGIT must be consulted.

Budget data of an administrative nature

Equipment, furniture, supplies and services								
Expert contracts and meetings								
In Union delegations								
Missions, conferences and representation expenses								
Further training of staff								
Subtotal HEADING 7 of the multiannual financial framework	p.m							

Budget data of an administrative nature

EUR million (to three decimal places)

Outside HEADING 7 of the multiannual financial framework	2021	2022	2023	2024	2025	2026	2027	Total
Expenditure on technical and administrative assistance (not including external staff) from operational appropriations (former 'BA' lines)								
- at Headquarters	2.745	4.725	5.500	5.500	5.500	5.500	5.500	34.970
- in Union delegations								
Other management expenditure for research								
Other budget lines (<i>specify where necessary</i>)								
Sub-total – Outside HEADING 7 of the multiannual financial framework	2.745	4.725	5.500	5.500	5.500	5.500	5.500	34.970
TOTAL HEADING 7 and Outside HEADING 7 of the multiannual financial framework	5.645	9.225	11.150	11.150	11.150	11.150	11.150	70.620

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

3. METHODS OF CALCULATION USED TO ESTIMATE COSTS

1. Human resources

This part sets out the method of calculation used to estimate the human resources considered necessary (workload assumptions, including specific jobs (Sysper 2 work profiles), staff categories and the corresponding average costs)

HEADING 7 of the multiannual financial framework

NB: The average costs for each category of staff at Headquarters are available on BudgWeb:
https://myintracomm.ec.europa.eu/budgweb/EN/pre/legalbasis/Pages/pre-040-020_preparation.aspx

• Officials and temporary staff

- Executive Director (TA)
- Executive Personal Assistant (TA)
- Head of Unit Program Implementation (TA)
- Head of Unit Administration, Finance & Support (TA)
- Senior Program Officer (TA)
- 5x Program Officers HPC Infrastructure (TA)
- 5x Program Officers HPC R&D (TA)
- 5x Program Officers Quantum Infrastructure (TA)
- Legal Advisor (TA)
- IT Manager (TA)
- Communication Officer (TA)

- Executive Administrative Assistant (CA)
- Communication Assistant (CA)
- Administrative Officer (CA)
- Administrative Assistant (CA)
- IT Assistant (CA)
- Accounting and Budget Officer (CA)
- Accounting and Budget Assistant (CA)
- Finance Team Leader (CA)
- 3x Financial Assistant Initiation (CA)
- 3x Financial Assistant Verification (CA)
- Data Protection Officer (CA)
- HR Officer (CA)
- HR Assistant (CA)
- Legal Assistant (CA)
- Stakeholder Relations Officer (CA)
- Office and Local Assistant (CA)
- Internal Control and Audit Officer (CA)

• External staff

Budget data of an administrative nature

Outside HEADING 7 of the multiannual financial framework

- Only posts financed from the research budget

- External staff

2. Other administrative expenditure

Give details of the method of calculation used for each budget line

and in particular the underlying assumptions (e.g. number of meetings per year, average costs, etc.)

HEADING 7 of the multiannual financial framework

Buildings and associated costs

The JU has to ensure that the working conditions of its staff comply with the standards of the EU institutions. The office premises will be offered by the JU hosting country. This appropriation includes costs related to the infrastructure: insurance, water, electricity and heating, cleaning and maintenance, security and surveillance.

Information Technology

To allow its staff to perform its work, the Joint Undertaking is equipped with state-of-the-art office equipment and networking facilities, allowing to use the standard IT toolchain of the EU programmes and institutions. This appropriation is intended to cover the purchase of computing and other similar electronic office equipment and hardware as well as the installation, configuration and maintenance of this equipment. The procurement and maintenance of program packages and software licences necessary for the normal operation of the JU; the expenditure on services contracts for analysis, programming and technical assistance necessary for the JU, the cost of external services contracts to manage and maintain the data and systems, training and other support activities.

It covers the cost of SLAs with the Commission, necessary for the use of the ABAC accounting system (SLA with DG BUDG), as well as for the provision of IT equipment/services (SLA with, DIGIT, REA, RTD, CdT, HR and/or CNECT). It also includes costs specific to the secure data communication needs of the JU to access the ABAC accounting system.

Movable property

This includes the necessary resources to cover the costs of office organisation, archive spaces and meeting rooms.

Current administrative expenditure

This includes costs of office supplies, stationery, badges, office material and other consumables necessary for the operation of the office as well as any costs incurred for any mandatory translations,)

Postage and Telecommunications

This covers all correspondence, postage and telecommunication (fixed, mobile telephony and videoconference equipment/licencing) costs of the JU.

Expenditure of formal and other meetings

As part of the activities of the Joint Undertaking, some meetings (like Governing Board meetings and community workshops) require big rooms that are not available at the JU premises.

Operational activities

Auditing and legal assistance are key elements to ensure that the JU complies with the legal framework. (e.g. internal audit capability, external auditors and ex-post audits)

Communication activities related to publishing, and in particular communication material for conferences, info days and workshops; website development and consolidation; general public relations and publicity.

Information and Publishing

This covers the communication policy of the Joint Undertaking, to ensure public awareness and understanding of the scopes. It is also covering the activities related to production and printing the Annual Activity and other Reports.

Expert contracts and meetings

This includes the costs related to the evaluation, selection and review of projects, as well as the costs incurred for evaluators and reviewers.

Outside HEADING 7 of the multiannual financial framework

COM (2020) 569

Information Note

1. Proposal

Proposal for a COUNCIL REGULATION on establishing the European High Performance Computing Joint Undertaking.

2. Date of Commission document

18.9.2020

3. Number of Commission document

COM (2020) 569

4. Number of Council document:

1098/20; 1098/20 ADD 1 (Annex); 1098/20 ADD 2 (Annex); 1098/20 ADD 3 (Annex)

5. Dealt with in Brussels by

*Competitiveness Council
Research Working Party*

6. Department with primary responsibility

Department of Business, Enterprise and Innovation (pending transfer of research function to the Department of Further and Higher Education, Research, Innovation and Science)

7. Other Departments involved

None

8. Background to, Short summary and aim of the proposal

The EuroHPC Joint Undertaking was established in October 2018 as a legal and financial framework, pooling resources from the EU, 32 countries, and Private Members. So far, the Joint Undertaking has used funds from the 2014-2020 Multiannual Financial Framework (MFF) for its strategic investments. After 20 months of operation, it has substantially increased overall investment in HPC at European level and has started to deliver on its mission to restore Europe's position as a leading HPC power. By the end of 2020, it will deploy a world-class supercomputing and data infrastructure accessible to public and private users all over Europe. Its investments are also supporting HPC Competence Centres throughout Europe, which ensure that HPC is widely available in the Union and provide specific services and resources for industrial innovation (including SMEs) and the development of HPC skills, and research and innovation in critical HPC hardware and software technologies and applications.

The proposed Regulation is in essence a continuation of the existing initiative established under Council Regulation (EU) 2018/1488, introducing modifications to adapt the Regulation to the next multiannual financial framework (MFF) Programmes, but also to reflect the priorities of the Commission, and to make it possible for the Joint Undertaking to use funding from the new MFF programmes for 2021-2027. These programmes are Horizon Europe, the Digital Europe Programme and the Connecting Europe Facility. This funding will be essential for Europe to reach this next supercomputing frontier of exascale computing.

It will allow the Union to equip itself with a world-class federated, secure and hyper-connected supercomputing and quantum computing service and data infrastructure, and to develop the necessary technologies, applications and skills.

As the main drivers and objectives of the EuroHPC Joint Undertaking have remained unchanged since its establishment, the Impact Assessment published in January 2018, remains valid.

9. Legal basis of the proposal

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

The proposed Regulation is in essence a continuation of the existing initiative established under Council Regulation (EU) 2018/1488, introducing modifications to adapt the Regulation to the next multiannual financial framework (MFF) Programmes, but also to reflect the priorities of the Commission, and to make it possible for the Joint Undertaking to use funding from the new MFF programmes for 2021-2027.

10. Voting Method

QMV

11. Role of the EP

Co-decision

12. Category of proposal

Some significance and some comitology involvement.

13. Implications for Ireland & Ireland's Initial View'

Ireland welcomes the new regulation which expand the scope and budget of the Joint Undertaking and it will continue its participation in EuroHPC through representation on the Governing Board and Irish involvement in individual HPC projects.

Ireland has a concern with the proposed centralised management of financial contributions (CMFC) contained in the draft regulation.

“Partnerships in accordance with Article 185 TFEU or pursuant to Article 187 TEFU shall implement a central management of all financial contributions, except in duly justified cases. In case of central financial management, project level contributions from one participating state will be made on the basis of the funding requested in proposals from entities established in that participating state, unless otherwise agreed among all participating states concerned.”

Discussions among the EuroHPC Participating States are ongoing and Ireland supports efforts to seek an exception to the centralised management of financial contributions (CMFC).

14. Impact on the public

None.

15. Have any consultations with Stakeholders taken place or are there any plans to do so?

Yes – the Irish Centre for High-End Computing (ICHEC), as the primary beneficiary of Ireland’s participation in the EuroHPC Joint Undertaking, has been consulted with particular regard to the Central Management of Financial Contributions.

16. Are there any subsidiarity issues for Ireland?

No.

17. Anticipated negotiating period

Inclusion on Council Research Working Party agenda October 26th, with further negotiations anticipated in November.

18. Proposed implementation date

The regulation is expected to be adopted by the EU Council in May of 2021. Once the new regulation is in place, a work plan will be prepared with the first calls for new projects expected before summer 2021.

19. Consequences for national legislation

Not applicable.

20. Method of Transposition into Irish law

Not applicable.

21. Anticipated Transposition date

Not applicable.

22. Consequences for the EU budget in Euros annually

Total EU budget under the next Multi-Annual Financial Framework remains to be determined. However, the following indicative costs have been provided by the Commission.

Horizon Europe: TBD

Digital Europe Programme: up to [EUR 2.4 billion]

Connecting Europe-2 Facility: up to [EUR 200 million]

23. Contact name, telephone number and e-mail address of official in Department with primary responsibility

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Date 13th October 2020