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LEGISLATIVE ACTS AND OTHER INSTRUMENTS

Subject: COUNCIL REGULATION amending Regulation (EU) 2021/1173 as regards an EuroHPC initiative for start-ups in order to boost European leadership in trustworthy artificial intelligence

COUNCIL REGULATION (EU) 2024/...

of ...

**amending Regulation (EU) 2021/1173
as regards an EuroHPC initiative for start-ups
in order to boost European leadership
in trustworthy artificial intelligence**

THE COUNCIL OF THE EUROPEAN UNION,

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

Having regard to the proposal from the European Commission,

Having regard to the opinion of the European Parliament¹,

Having regard to the opinion of the European Economic and Social Committee²,

Acting in accordance with a special legislative procedure,

¹ Opinion of 24 April 2024 (not yet published in the Official Journal).

² Opinion of 20 March 2024 (not yet published in the Official Journal).

Whereas:

- (1) Regulation of the European Parliament and of the Council on harmonised rules on artificial intelligence (the ‘AI Act’) aims to improve the functioning of the internal market by laying down a uniform legal framework in particular for the development, marketing and use of artificial intelligence (‘AI’) in conformity with Union values.
- (2) Since 2021, when Council Regulation (EU) 2021/1173³ was adopted, the field of AI has seen enormous technical progress and become a highly strategic and contested domain globally. The Union is at the forefront of efforts to support responsible research and innovation in trustworthy and ethical AI, while setting guardrails and developing effective governance.
- (3) On 13 September 2023, as part of a comprehensive approach to support responsible research and innovation in AI, the Commission announced a new strategic initiative to make the Union’s high-performance computing capacity available to innovative European startups in trustworthy AI in order to train their models. That initiative complements work on setting guardrails for AI through the AI Act, establishing governance structures and supporting innovation through the Coordinated Plan on Artificial Intelligence.

³ Council Regulation (EU) 2021/1173 of 13 July 2021 on establishing the European High Performance Computing Joint Undertaking and repealing Regulation (EU) 2018/1488 (OJ L 256, 19.7.2021, p. 3).

- (4) Given that the Union's most powerful world-class supercomputing capacity is located in the European High Performance Computing Joint Undertaking's (the 'Joint Undertaking') facilities, it is those facilities that should be made available in order for the Union's initiative to become a reality. It is accordingly necessary to add a seventh objective to the existing six objectives of the Joint Undertaking, concerning the contribution made by its supercomputers to the new AI initiative of the Union.
- (5) The new objective would allow the Joint Undertaking to perform activities in the domains of acquiring and operating AI-optimised supercomputers or partitions of supercomputers to enable machine learning and training of general purpose AI models. The Joint Undertaking should be allowed to create a new access mode to its computing resources for the AI startup ecosystem and the research and innovation ecosystem and to develop dedicated AI applications that are optimised to run on its supercomputers. The Joint Undertaking should also be allowed to appoint existing European High Performance Computing hosting entities as AI factories if the hosting entity can demonstrate that its supercomputer has enough computing resources for training large scale and general-purpose AI models and emerging AI applications, and provided that the hosting entity implements the full range of additional activities necessary to develop and support the AI ecosystem. Those changes would enable the Joint Undertaking to offer tailored computing power and services to nurture large-scale AI training, development and uptake in the Union, which is not feasible under the current Regulation. AI factories should interact with one another and with relevant AI initiatives of the Union, and, where applicable, AI factories can interact with relevant national AI ecosystems and national AI initiatives.

- (6) In order to coordinate the date of application of the changes introduced by this amending Regulation with the date of application of the AI Act, this amending Regulation should apply without undue delay.
- (7) Regulation (EU) 2021/1173 should therefore be amended accordingly,

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EU) 2021/1173 is amended as follows:

(1) Article 2 is amended as follows:

(a) the following points are inserted:

‘(3a) ‘AI-optimised supercomputer’ means a supercomputer that is designed primarily for training large scale, general-purpose artificial intelligence (‘AI’) models and emerging AI applications;

(3b) ‘AI factory’ means a centralised or distributed entity that provides an AI supercomputing service infrastructure which is composed of an AI-optimised supercomputer or an AI partition of a supercomputer, an associated data centre, dedicated access and AI-oriented supercomputing services, and which attracts and pools talent to provide the competences required to use the supercomputers for AI;’;

(b) point (9) is replaced by the following:

‘(9) ‘EuroHPC supercomputer’ means any computing system which is fully owned by the Joint Undertaking or co-owned with other Participating States or a consortium of private partners and which is a classical supercomputer (high-end supercomputer, industrial-grade supercomputer, AI-optimised supercomputer or mid-range supercomputer), a hybrid classical-quantum computer, a quantum computer or a quantum simulator;’;

(2) in Article 3(2), the following point is added:

‘(h) to develop and operate the AI factories in support of the further development of a highly competitive and innovative AI ecosystem in the Union.’;

(3) in Article 4(1), the following point is added:

‘(h) AI factory pillar for trustworthy and ethical AI, covering activities for the provision of an AI-oriented supercomputing service infrastructure that aims to further develop the research and innovation capabilities, competences and skills of the AI ecosystem; it shall include the following activities:

- (i) the acquisition and operation of AI-optimised supercomputers co-located with data centres or connected to data centres via very high speed networks;
- (ii) the upgrading of existing EuroHPC supercomputers with AI capabilities;

- (iii) providing access and fair access opportunities to the AI-optimised supercomputers or EuroHPC supercomputers that have been upgraded with AI capabilities, including widening their use to a large number of public and private users, including startups and small and medium-sized enterprises;
- (iv) the operation of centralised or distributed AI-oriented supercomputing service centres in support of the AI startup ecosystem and the research and innovation ecosystem providing algorithmic support, support for the further development, training, testing, evaluation and validation of AI training models and systems, and support for the development of emerging large-scale AI applications in strategic areas such as health and care, climate change, robotics, or connected and automated driving;
- (v) the operation of supercomputer-friendly programming facilities, including for the parallelisation of AI applications for optimising the use of supercomputing capabilities;
- (vi) the operation of other AI-enabling supercomputing services;
- (vii) attracting, pooling and training talent to develop their competences and skills in using the EuroHPC supercomputers for AI;

(viii) interacting with the other AI factories, making their services accessible across Europe and cooperating with the EuroHPC Competence Centres and EuroHPC Centres of Excellence, and with relevant AI initiatives of the Union, such as the hubs of Artificial Intelligence startups, the Artificial Intelligence and data ecosystems, the Artificial Intelligence Testing and Experimentation Facilities, the European central Artificial Intelligence platform, the Artificial Intelligence-oriented Digital Innovation Hubs, the Artificial Intelligence related European Institute of Innovation and Technology Knowledge and Innovation Communities, relevant European research infrastructures and other related initiatives.’;

(4) Article 9 is amended as follows:

(a) in paragraph 5, the following subparagraph is added:

‘For the AI-optimised supercomputers the following additional selection criteria shall apply for the hosting entities:

- (a) proximity with an established datacentre or connection to an established datacentre via very high speed networks;
- (b) vision, plans and capability of the hosting entity to address the challenges of the AI startup ecosystem, the research and innovation ecosystem and the AI user community, and providing a supportive centralised or distributed AI-oriented supercomputing service;

- (c) quality and pertinence of experience and know-how available amongst the team that is expected to be in charge for the supportive AI-oriented supercomputing service environment;
 - (d) plans for interaction and cooperation with other AI factories, with EuroHPC Competence Centres and EuroHPC Centres of Excellence and with relevant AI initiatives such as the hubs of Artificial Intelligence startups, the Artificial Intelligence and data ecosystems, the Artificial Intelligence Testing and Experimentation Facilities, the European central Artificial Intelligence platform, the Artificial Intelligence-oriented Digital Innovation Hubs and other related initiatives;
 - (e) existing capabilities and future plans of the hosting entity to contribute to the development of the talent pool.’;
- (b) the following paragraph is inserted:
- ‘5a. An existing hosting entity may apply to become an AI factory. Following a call for expression of interest, an existing hosting entity shall be selected by the Governing Board through a fair and transparent process based, inter alia, on the selection criteria described in Article 9(5), second subparagraph, and provided that the hosting entity can demonstrate that its EuroHPC supercomputer has enough computing resources for training large scale, general-purpose AI models and emerging AI applications.’;

(c) the following paragraph is inserted:

‘6a. For the AI-optimised supercomputers referred to in Article 12a, the hosting entity shall create a one-stop shop for users, including startups, small and medium-sized enterprises and scientific users, to facilitate access to its support services.’;

(5) in Article 10(2), point (l) is replaced by the following:

‘(l) the specific conditions applicable when the hosting entity operates a EuroHPC supercomputer for industrial usage or an AI-optimised supercomputer.’;

(6) the following article is inserted:

‘Article 12a

Acquisition and ownership of AI-optimised supercomputers

1. The Joint Undertaking shall acquire AI-optimised 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 AI-optimised supercomputers. The operating costs include the costs for AI-oriented supercomputing services.

The remaining total cost of ownership of the AI-optimised 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 AI-optimised supercomputers shall address the security of the supply chain. It shall be based on tender specifications that are demand-driven and that take into account the user requirements and the general system specifications provided by the selected hosting entity in its application for the call for expression of interest.
4. The Joint Undertaking may act as first user of AI-optimised supercomputers that integrate technologies primarily developed in the Union.
5. The Governing Board may decide in the work programme, if duly justified for security reasons, to condition the participation of suppliers in the acquisition of the AI-optimised supercomputers in accordance with Article 12(6) of Regulation (EU) 2021/694, or to limit the participation of suppliers for security reasons or where the actions directly relate to the Union's strategic autonomy in accordance with Article 18(4) of that Regulation.
6. The AI-optimised supercomputers shall be located in a hosting entity of a EuroHPC supercomputer or a supercomputing centre located in the Union.

7. Without prejudice to the winding up of the Joint Undertaking, as referred to in Article 23(4) of the Statutes, at the earliest five years after the successful acceptance test by the AI-optimised supercomputer installed in a hosting entity, the ownership of the AI-optimised supercomputer may be transferred to that hosting entity or the AI-optimised supercomputer may be 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 an AI-optimised 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 to decommission the AI-optimised supercomputer, 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 AI-optimised supercomputer or after the sale or decommissioning of the AI-optimised supercomputer.’;

(7) Article 15 is amended as follows:

(a) paragraph 1 is replaced by the following:

‘1. The Joint Undertaking may launch a call for expressions of interest to upgrade the EuroHPC supercomputers that it owns or co-owns, to raise the performance level of the supercomputer close to exascale, to increase the AI capabilities of the supercomputer, or to increase the operational performance of the supercomputer in any other way, including by means of quantum accelerators.’;

- (b) paragraph 2 is deleted;
- (c) paragraph 5 is replaced by the following:

‘5. The percentage of the Union’s financial contribution for the acquisition costs of the upgrade shall be the same as the percentage of the Union’s financial contribution for the original EuroHPC supercomputer, depreciated over the expected remaining lifetime of the original supercomputer. The percentage of the Union’s financial contribution for the additional operational costs of the upgrade shall be the same as the percentage of the Union’s financial contribution for the original EuroHPC supercomputer. For the petascale supercomputers acquired during the time of application of Regulation (EU) 2018/1488 the Union financial contribution for the upgrade shall cover up to 35 % of the additional operating costs.’;

- (8) Article 16 is amended as follows:

- (a) the following paragraph is inserted:

‘1a. The AI-optimised supercomputers and EuroHPC supercomputers upgraded for AI capabilities shall be used primarily for the development, testing, evaluation and validation of large scale, general purpose AI training models and emerging AI applications, as well as for the further development of AI solutions in the Union requiring High Performance Computing and the execution of large-scale AI algorithms for the resolution of science problems.’;

(b) the following paragraph is inserted:

‘2a. The Governing Board shall define special access conditions for the AI-optimised supercomputers and the EuroHPC supercomputers upgraded for AI capabilities in accordance with Article 17, taking into account the specific needs of the AI startup ecosystem and the research and innovation ecosystem. Those shall include dedicated access to startups and small and medium-sized enterprises. Only proposals for developing trustworthy and ethical AI models, systems and applications, that are in line with Union values, shall be eligible for access.’;

(9) in Article 17, paragraph 1 is replaced by the following:

‘1. The share of the Union’s access time to each high-end, quantum and AI-optimised 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.’.

Article 2

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 ..., ...

For the Council
The President
