European High Performance Computing Joint Undertaking

REF: EUROHPC-2024-CEI-AI-02

CALL FOR EXPRESSION OF INTEREST

for the selection of Hosting Entities for the acquisition of an AI-optimised supercomputer or the upgrade of an existing EuroHPC supercomputer with AI capabilities, an advanced Experimental AI-optimised Supercomputing Platform (optional), and the establishment of an AI Factory

Contents

1. INTRODUCTION – CONTEXT AND BACKGROUND

The European High Performance Computing Joint Undertaking (hereinafter referred to as 'EuroHPC JU) was established by Council Regulation (EU) 2021/1173 of 13 July 2021[1] amended by Council Regulation (EU) **2024/1732 of 17 June 2024 amending Regulation (EU) 2021/1173 as regards a EuroHPC initiative for start-ups in order to boost European leadership in trustworthy artificial intelligence** which entered into force on 9 July 2024[2] (hereinafter referred to as 'Regulation').

According to Article 3 of the Regulation, the mission of the EuroHPC JU is to develop, deploy, extend and maintain in the Union a federated, secure hyperconnected supercomputing, quantum computing, service and data infrastructure ecosystem; to support the development and uptake of demand-oriented and user-driven innovative and competitive supercomputing systems based on a supply chain that will ensure components, technologies and knowledge limiting the risk of disruptions and the development of a wide range of applications optimised for these systems; and, to widen the use of that supercomputing infrastructure to a large number of public and private users, and to support the twin transition and the development of key skills for European science and industry. **As per the recent amendment to the EuroHPC JU Regulation, Art 3 has introduced a new objective to be pursued by the EuroHPC JU which is "to develop and operate the Artificial Intelligence Factories in support of the further development of a highly competitive and innovative Artificial Intelligence ecosystem in the Union".**

Two different possibilities are enabled to establish an AI factory: one that is to develop it around a newly acquired AI-optimised supercomputer (hereinafter "new AI EuroHPC supercomputer") or to develop it around an upgrade of an existing EuroHPC supercomputer with AI capabilities (hereinafter "upgraded AI EuroHPC supercomputer").

The acquisition of new AI EuroHPC supercomputers is based on Article 12a of the Regulation, whereby the EuroHPC JU shall acquire them and shall own them. An AI-optimised supercomputer means a supercomputer that is primarily designed for training large scale, general-purpose Artificial Intelligence models and emerging artificial intelligence applications. In accordance with Article 12a(2) of the Regulation, the Union's contribution should cover up to 50 % of the acquisition costs plus up to 50 % of the operating costs of these AI-optimised supercomputers. The EuroHPC JU will be the owner of the AI optimised supercomputers it has acquired.

The acquisition of an upgraded AI EuroHPC supercomputers is based on Articles 4(1)(h) and 15(1) of the Regulation. According to Article 15(4) of the Regulation, the EuroHPC JU shall acquire, jointly with the contracting authorities of the Participating State where the selected hosting entity is established or with the contracting authorities of the Participating States in the selected hosting consortium, the upgrade of the supercomputer and shall own it under the same conditions of ownership of the original EuroHPC supercomputer. In accordance with Article 15(5) of the Regulation, 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. 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.

Pursuant to Article 12(a) of the Regulation, the EuroHPC JU shall own the new AI EuroHPC supercomputers for a duration of at least five years. Pursuant to Article 15 of the Regulation, the EuroHPC JU shall own the upgraded AI EuroHPC supercomputer under the same conditions of ownership of the original EuroHPC supercomputer.

The aim of AI factories is to provide the European startups as well as the industrial and the scientific community at large with enhanced access to AI optimised computing capabilities for the large-scale

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

[2] OJ L, 19.6.2024, ELI: http://data.europa.eu/eli/reg/2024/1732/oj.

training and development of general-purpose AI models, and for the development, validation and running of emerging AI applications. In this context it becomes essential that AI Factories are established swiftly, therefore Hosting Entities or Hosting Consortia must act swiftly and avoid delays in acquiring and deploying the relevant new and/or upgraded supercomputers and setting up AI Factories.

One of the targets of the EuroHPC JU is also promoting the further development of European technologies and thus contributing to developing a competitive European technology supply industry. As part of this objective, **interested hosting entities may also include in their application an optional system/partition targeting the development of an advanced experimental AI-optimised supercomputing platform**. The goal of such a platform shall be to develop an exploratory supercomputing infrastructure for the development, integration, testing, and co-design of a wide range of European technologies suitable to be part of a newly acquired or upgraded EuroHPC supercomputer.

For the newly acquired or upgraded AI EuroHPC supercomputer, **the hosting entity shall create a one-stop shop for the users, including startups, small and medium-sized enterprises and scientific users, to facilitate access to its support services, the so called "AI Factory".** The Union's contribution shall cover up to 50 % of the operational costs of the AI Factories.

Pursuant to Article 9(3) of the Regulation, the EuroHPC JU shall entrust to a hosting entity the operation of each individual new or upgraded AI EuroHPC supercomputer it owns in accordance with Articles 10 and 15 of the Regulation. The hosting entity shall be selected by the Governing Board of the EuroHPC JU (hereinafter referred to as 'Governing Board') following a Call for Expression of Interest evaluated by independent experts.

The present Call for Expression of Interest is launched for the selection of hosting entities of new AI EuroHPC supercomputers or for upgraded AI EuroHPC supercomputers, and the establishment of associated AI Factories the EuroHPC JU will acquire and operate as mandated, on the basis and in accordance with the Regulation, taking into account the EU Financial Regulation[3] where relevant on the basis of the Financial Rules of the EuroHPC JU[4]. The present Call for Expression of Interest includes also an optional part on the development and operation of an Advanced Experimental AI-optimised Supercomputing Platform.

The present Call for Expressions of Interest is open to entities or consortia of entities fulfilling the conditions as defined in Article 9 of the EuroHPC Regulation. Section 6 below presents the eligibility criteria. **The call shall be continuously open until 31st December 2025, with pre-defined cut-off dates that will trigger the evaluation of the applications submitted up to each respective cut-off date or until the depletion of available funds.**

> **Annex 1 provides the structure and the contents to be provided by an application to be submitted under the present Call for Expressions of Interest.**

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[3] Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012, OJ L 193, 30.7.2018, p. 1 (hereinafter referred to as 'FR').(https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32018R1046).

[4] Decision of the Governing Board of the EuroHPC JU No 3/2020 Approving the Financial Rules of the EuroHPC Joint Undertaking readopted by Decision of the Governing Board of the EuroHPC JU No 17/2021 approving the re-adoption of Governing Board Decisions adopted under the framework of Regulation (EU) 2018/1488 and its updated Rules of Procedure in the view of Regulation (EU) 2021/1173.

2. OBJECTIVES

The overall objective of this call is to select hosting entities for AI-optimised supercomputers or existing hosting entities to upgrade existing EuroHPC supercomputers with AI capabilities, to acquire Advanced Experimental AI-optimised Supercomputing Platforms (optional), **as well as to establish an associated AI Factory which will be undertaken by the EuroHPC JU.**

The <u>specific objective</u> of this call is as follows:

Selection of a new hosting entity and conclusion of a new hosting agreement in the case where an applicant targets the acquisition of a new AI EuroHPC supercomputer or selection of an existing hosting entity for an upgraded AI EuroHPC supercomputer in the case the applicants intend to upgrade an existing EuroHPC supercomputer with AI capabilities. The EuroHPC JU will select such hosting entities as well as the associated "AI Factories" and will conclude a hosting agreement, which will permit to establish a stable and structured partnership between the EuroHPC JU and the hosting entity for:

- the acquisition, integration and operation of the new or the upgraded AI EuroHPC supercomputer,
- the development and operation of an Advanced Experimental AI-optimised Supercomputing Platform – this part of the call is optional,
- and the establishment and operation of the associated "AI Factory".

By submitting the application, applicant hosting entities provide their prior acceptance of the terms and conditions set out in the model hosting agreement. Such model hosting agreement will be made available in due time, before the first call cut-off date.

The hosting agreement will be approved by the Governing Board before signature.

The EuroHPC JU will evaluate, with the help of external experts, the received applications to the call for expression of interest and will draw up a ranking list of candidate hosting entities (or their hosting consortia) for new AI EuroHPC supercomputers or for upgraded AI EuroHPC supercomputers, for Advanced Experimental AI-optimised Supercomputing Platforms (optional), and for setting up an AI Factory around the new or the upgraded AI supercomputers. From this ranking list, the EuroHPC JU, by decision of its Governing Board, will select the hosting entities. Inclusion in the list does not in and as of itself entail an obligation on the part of the EuroHPC JU to conclude the hosting agreement or any other contract with the selected hosting entity.

Following this selection, the following procedures will apply:

- In the case where an applicant targets the acquisition of a new AI EuroHPC supercomputer: a **hosting agreement between the EuroHPC JU and the selected hosting entity or hosting consortium will be signed**, laying down the terms and conditions for hosting and operating the new AI EuroHPC supercomputer and establishing and operating an associated "AI Factory" around this supercomputer on behalf of the EuroHPC JU, including a service level agreement (Article 10(2)(c) of the Regulation). The time limit for signing the hosting agreement is 1 month after the Governing Board decision to accept the proposal for funding of the AI Factory.

   For the case where an applicant intends to upgrade their existing EuroHPC Supercomputer with AI capabilities, **the existing hosting agreement between the EuroHPC JU and the selected hosting entity (or hosting consortium) will be amended**, to account for the upgrading, hosting and operation of the upgraded AI EuroHPC supercomputer, and for establishing and operating an associated "AI Factory" around this upgraded supercomputer on behalf of the EuroHPC JU, including a service level agreement (Article 10(2)(c) of the Regulation). The time limit for signing the amended hosting agreement is 1 month after the Governing Board decision to accept the proposal for funding of the AI Factory.

The new or amended hosting agreement shall specify the timing of the transfer to the EuroHPC JU of the financial contribution of the selected hosting entity covering the acquisition costs of the upgrade of the EuroHPC supercomputer with AI capabilities. The amended hosting agreement is part of the outcome of the Call for Expression of Interest. **It is the first contractual arrangement to be signed.**

The publication of the Call for Tender for the acquisition or upgrade of an AI optimised supercomputer should be published no later than 3 months after the notification of the selection decision to the successful hosting entity or hosting consortium by the EuroHPC GB.

- **A second contractual arrangement between the EuroHPC JU and the hosting entity shall be signed to cover the funding of the new or the upgraded AI EuroHPC supercomputer's operating costs** (specifying among others and if applicable any pre-financing of the hosting entity by the EuroHPC JU), which will be covered up to 50 % by the Union contribution. The operating costs must follow a well-defined, jointly agreed (with the hosting entity) and auditable model, which will be part of the contractual arrangement. There will be no transfer of funds from the hosting entity to the EuroHPC JU for the operating costs: the EuroHPC JU will cover its share of the eligible costs, while the hosting entity (or hosting consortium) will cover the remainder of the eligible costs.

- **A third contractual arrangement between the EuroHPC JU and the hosting entity shall be signed to cover the funding of the "Advanced Experimental AI-optimised Supercomputing Platform" eligible costs** (specifying among others and if applicable any pre-financing of the hosting entity by the EuroHPC JU), which will be covered up to 50 % by the Union contribution. This third contractual arrangement will be awarded only if the selection concerns also the optional part of the application on "Advanced Experimental AI-optimised Supercomputing Platform.

- **A fourth contractual arrangement between the EuroHPC JU and the hosting entity shall be signed to cover the funding of the "AI Factory" eligible costs** (specifying among others and if applicable any pre-financing of the hosting entity by the EuroHPC JU), which will be covered up to 50 % by the Union contribution.

- In close cooperation with and supported by the selected hosting entity, **the EuroHPC JU shall launch the procedures for the acquisition of the new or the upgraded AI EuroHPC supercomputer**. These procedures will, amongst other, aim at ensuring, where possible a diversity in the technologies and architectures of the different EuroHPC supercomputers. The EuroHPC JU will be responsible for implementing the acquisition process, however, the hosting entity will be associated to the process, e.g. for verification of the technical specifications to be met by the suppliers. The procurement procedure will be managed by EuroHPC JU as owner of the system. However, in accordance with the relevant provisions of the EU Financial Regulation, the EuroHPC JU may delegate the procurement to a selected hosting entity. In such a case, the EuroHPC JU shall have a supervisory role in the implementation of the procurement, i.e. be involved in drafting the tender specifications, the drafting of the evaluation criteria, organize the evaluation committee, and participate in the award decision. Where the EuroHPC JU delegates the procurement, it shall conclude a Joint Procurement Agreement with the hosting entity implementing the procurement.

3. BUDGET AVAILABLE

The Union financial contribution to the EuroHPC JU shall cover up to 50 % of the acquisition costs plus up to 50 % of the operating costs of the new AI EuroHPC supercomputer, up to 50 % of the development and operation costs of an Advanced Experimental AI-optimised Supercomputing Platform, and up to 50% of the costs associated with the setting up and operation of the "AI Factories". The remaining total cost of ownership of the AI-optimised supercomputer and those cost related to the

Advanced Experimental AI-optimised Supercomputing Platform and to the "AI Factories" shall be covered by the Participating State where the hosting entity is established or by the Participating States in the hosting consortium[5].

The percentage of the Union's financial contribution for the acquisition costs of an upgraded AI EuroHPC supercomputer 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 also cover up to 35 % of the additional operating costs.

The Union financial contribution to the EuroHPC JU shall cover up to 50 % of the development and operation costs of an Advanced Experimental AI-optimised Supercomputing Platform, and up to 50% of the costs associated with the setting up and operation of the "AI Factories".

The remaining total cost of ownership of the upgraded AI EuroHPC supercomputer and those costs related to the Advanced Experimental AI-optimised Supercomputing Platform and to the "AI Factories" shall be covered by the Participating State where the hosting entity is established or by the Participating States in the hosting consortium[6].

The Union's financial contribution both for to the EuroHPC JU for the acquisition of new or upgraded AI EuroHPC supercomputers is estimated at **EUR 400 million**[7] depending on budget availability (DEP funds).

The EuroHPC JU considers that a unitary EU contribution per a new or per an upgraded AI EuroHPC supercomputer of around EUR 200 million would allow this action to be addressed appropriately. Nonetheless, this does not preclude the submission and selection of a proposal requesting different amounts. The unitary EU contribution for this new or upgraded AI EuroHPC supercomputer will then be adapted (increased or decreased) to the requested EU contribution amount of the application, by also considering the number of already submitted and approved applications, and the remaining Union's funds.

The Union's total financial contribution to the EuroHPC JU for the setting up and operation of the 'AI Factories' and for the **development and deployment** of **advanced experimental AI-optimised supercomputing platform** is estimated at a maximum of **EUR 180 million**[8] depending on budget availability (Horizon Europe funds).

For a given AI Factory to be set up around an AI optimized EuroHPC supercomputer the maximum EU contribution for the establishing and running it is set at EUR 15 million for a period

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[5] 'hosting consortium' means a group of Participating States 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.

[6] 'hosting consortium' means a group of Participating States 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.

[7] The Union's financial contribution of EUR 400 million is based on the availability of funds in the EuroHPC JU Work Programme 2024. The overall Union's financial contribution to the EuroHPC JU for the acquisition of new or upgraded AI-EuroHPC supercomputers is estimated at EUR 800 million depending on the final budget availability (DEP funds).

[8] A total budget of up to EUR 120 million is foreseen for the setting up and operation of the 'AI Factories' and a total budget of up to EUR 60 million is foreseen for the development and deployment of advanced experimental AI-optimised supercomputing platform. However, a different budget combination may be applied according to the received submissions, in particular increasing the share dedicated to the AI Factories.

of 3 years. This amount concerns the hosting entity or its consortium of different partners located in the hosting Member State.

In the case of a hosting consortium the EU contribution may be increased by up to EUR 5 million per each Participating State in the hosting consortium. Participation in more than one AI Factory should be duly justified in the respective applications to avoid overlapping of activities and double funding .

The maximum amount of the EU contribution that may be allocated to an AI Factory with multiple Participating States is subject to EU budget availability.

For newly acquired AI EuroHPC supercomputers, grants will be established to cover the operating costs of the supercomputer[9] and for existing to be upgraded EuroHPC supercomputers, existing grants will be amended to cover **the additional operating costs of the upgraded AI EuroHPC supercomputers.** New grants will be established in both cases for the development and operating costs of an advanced experimental AI-optimised supercomputing platform (optional), and the setting up and operation of the 'AI Factories'. The reimbursement from the EuroHPC JU will be calculated on the basis of the declared costs up to the maximum total contribution of the EuroHPC JU or up to a ceiling of 50 % of the declared eligible costs, whichever is lower.

The costs related to the construction of the hosting site per se (i.e., costs related to the building infrastructure that will host the new or the upgraded AI EuroHPC supercomputer shall not be covered by the EuroHPC JU. However, the costs of the preparation and adaptation of the hosting site incurred by the hosting entity that can be directly accounted to the installation of the new or the upgraded AI EuroHPC supercomputer, and/or the advanced experimental AI-optimised supercomputing platform, may be considered as part of the Total Cost of Ownership (TCO) and may thus be considered as eligible costs that can be covered by the EuroHPC JU.

This action is an EU Synergy call. Grants and procurements can be linked with another grant funded from any other EU funding programme. The grants under both calls will be managed as linked actions.

4. CONTENT OF THE EXPRESSIONS OF INTEREST

The expressions of interests must be submitted using the application form included as a separate Annex 1 to this call (EuroHPC HE Application Form). Annex 1 of this document provides information on how to fill in the Application Form.

5. ADMISSIBILITY REQUIREMENTS

In order to be admissible:

   a) Applications must be sent no later than **the 4th of November 2024 at 17:00 Luxembourg time**. This date is the first cut-off date of this continuously open call. Further cut-off dates are provided in section 10 Timetable.
   b) Applications must be submitted in writing (see section 11 "Procedure for the submission"), using the application form in the Annex 1 (EuroHPC HE Application Form) and available at [*https://eurohpc-ju.europa.eu/current-calls.*]
   c) Applications must be submitted in the English language in three paper copies and on a USB stick.

Failure to comply with those admissibility requirements will lead to the rejection of the application.

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[9] The EuroHPC JU Model Grant Agreement can be found on the EuroHPC JU website: https://eurohpc-ju.europa.eu/

6. ELIGIBILITY CRITERIA

The call is open to entities or consortia of entities fulfilling cumulatively the following conditions as defined in Article 9 of the EuroHPC Regulation[10]:

d) The applicant hosting entity shall include the facilities to host and operate a new or an upgraded AI EuroHPC supercomputer and to set up an 'AI factory' in a Participating State to the EuroHPC JU that is a Member State of the EU. The applicant hosting entity shall represent one Participating State that is a Member State or a hosting consortium of Participating States that have agreed to contribute to the acquisition or the upgrade and to the operation of the supercomputer, and to set up an 'AI Factory', (which may include several different legal entities from the same Participating State and/or from different Participating States). The applicant 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.

e) The coordinating applicant hosting entity has to be registered as a legal entity in one of the Participating States that is a Member State.

f) The applicant(s) must have a legal personality on the date of the deadline for submission of applications and must be able to demonstrate their existence as a legal person. In case the application is submitted by several different legal entities from the same Participating State and/or from different Participant States working together (consortium), this criterion (c) applies to all entities.

g) Applications should include the provision of appropriate supporting documentation proving the commitment of the Member State where the hosting entity is established and, in the case of a hosting Consortium, of the competent authorities of the Participating States of the hosting consortium to cover the share of the total cost of ownership of the new or the upgraded AI EuroHPC supercomputer, and the cost of the AI Factory that are not covered by the Union contribution as set out in Article 5 of the Regulation or any other Union contribution as set out in Article 6 of the Regulation, either until its ownership is transferred by the EuroHPC JU to that hosting entity or until the supercomputer is sold or decommissioned in case there is no transfer of ownership.

h) As the participation of suppliers in the acquisition of the new or the upgraded AI supercomputer is conditioned in accordance with Article 12(6) of Regulation (EU) 2021/694 and limited for security reasons or actions directly related to the Union's strategic autonomy, in accordance with Article 18(4) of that Regulation, applications should provide a first

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[10] The action covering the funding of the "Advanced Experimental AI-optimised Supercomputing Platform" eligible costs and the action covering the funding of the "AI Factory" eligible costs will be implemented by way of grants which will be awarded on the basis of Article 195 (f) of the Financial Regulation (EU, Euratom) 2018/1046 to Hosting Entities of EuroHPC AI oriented or AI upgraded supercomputers according to Governing Board Decision No xx/2024. The activities associated with the development of the Advanced Experimental AI-optimised Supercomputing Platform require a high degree of technical competence and specialisation in developing exploratory supercomputing infrastructure for the development, integration, testing and co-design of a wide range of European technologies being part of the AI supercomputer infrastructure. The activities associated with the AI factory require a high degree in specialisation bringing together AI computing infrastructure and storage facilities, data, support tools, AI algorithms and talent. These actions can only be implemented alongside with the procurement for the acquisition and the operation activities of a new or upgraded AI EuroHPC supercomputer by the awarded Hosting Entities identified in this call (EUROHPC-2024-CEI-AI-02)), or the awarded Hosting Entity of an existing EuroHPC supercomputer evaluated as AI ready in this call. After the award of a grant under Article 195 (f) of the Financial Regulation (EU, Euratom) 2018/1046, it is not possible to change the Hosting Entity or the composition of a Hosting Consortium anymore, further entities will not be able to join the Hosting Entity or Hosting Consortium throughout the implementation of the grant.

indication on whether the applicant would consider conditioning or limiting the participation of suppliers for security reasons and/or reasons related to the Union's strategic autonomy.

In case of a hosting consortium, the hosting agreement shall take the form of a partnership of the legal entities from the same Participating State and/or from different Participating States, of which the hosting entity will take the lead and act as coordinator of the hosting consortium. The co-ordinator will act as an intermediary for all communications between the EuroHPC JU and the partners. However, partners are jointly responsible for implementing the action(s) resulting from the awarded or amended hosting agreement. To implement the action(s) properly, they must make appropriate internal arrangements.

The hosting entity or hosting consortium shall assume full liability towards the EuroHPC JU for the performance of the agreement as a whole, including financial and operational liability.

In accordance with Article 9 of the Regulation, after the selection of the hosting entity, the Participating State where the selected hosting entity is established (in the case of an application including only one Participating State) or the corresponding hosting consortium may decide to invite, subject to the prior agreement of the Commission, additional Participating States, 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's financial contribution and the corresponding ownership rights and percentage of access time allocated to the Union with regard to the new or the upgraded AI EuroHPC supercomputer as defined in Articles 12a and 15 of the Regulation.

In the case of a joint application by a hosting consortium, the hosting entity must be given power of attorney to represent the other parties to sign and administrate the hosting agreement (consortium leader).

In order to assess the applicants' eligibility, the following supporting documents are requested:

- The legal entity identification form[11] duly completed and signed by the person authorised to enter into legally binding commitments on behalf of the applicant organisation(s) to be submitted in original;

- Hosting consortium: in addition to the supporting documents referring to their legal status, the hosting consortium members will submit a signed declaration based on the model Consortium Agreement/Power of Attorney, appointing a consortium leader and giving a mandate to him (included as Annex 1B).

- Each applicant and Participating State in a hosting consortium must fill-in and provide the duly signed Declaration of Honour (included as Annex 1A).

The following entities will be considered as non-eligible:

a) natural persons;

b) entities without legal personality.

7. EXCLUSION CRITERIA

7.1. Exclusion[12]

The Executive Director of the EuroHPC JU shall exclude an applicant from participating in this call for expression of interest where:

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[11] http://ec.europa.eu/budget/contracts_grants/info_contracts/legal_entities/legal_entities_en.cfm
[12] Article 136 FR

(a) the applicant is bankrupt, subject to insolvency or winding-up procedures, its assets are being administered by a liquidator or by a court, it is in an arrangement with creditors, its business activities are suspended, or it is in any analogous situation arising from a similar procedure provided for under EU or national laws or regulations;

(b) it has been established by a final judgment or a final administrative decision that the applicant is in breach of its obligations relating to the payment of taxes or social security contributions in accordance with the applicable law;

(c) it has been established by a final judgment or a final administrative decision that the applicant is guilty of grave professional misconduct by having violated applicable laws or regulations or ethical standards of the profession to which the applicant belongs, or by having engaged in any wrongful intent or gross negligence, including, in particular, any of the following:

(i) fraudulently or negligently misrepresenting information required for the verification of the absence of grounds for exclusion or the fulfilment of eligibility or selection criteria or in the performance of a contract, a grant agreement or a grant decision;

(ii) entering into agreement with other applicants with the aim of distorting competition;

(iii) violating intellectual property rights;

(iv) attempting to influence the decision-making process of the EuroHPC JU during the award procedure;

(v) attempting to obtain confidential information that may confer upon it undue advantages in the award procedure;

(d) it has been established by a final judgment that the applicant is guilty of any of the following:

(i) fraud, within the meaning of Article 3 of Directive (EU) 2017/1371 of the European Parliament and of the Council and Article 1 of the Convention on the protection of the European Communities' financial interests, drawn up by the Council Act of 26 July 1995;

(ii) corruption, as defined in Article 4(2) of Directive (EU) 2017/1371 or Article 3 of the Convention on the fight against corruption involving officials of the European Communities or officials of Member States of the European Union, drawn up by the Council Act of 26 May 1997, or conduct referred to in Article 2(1) of Council Framework Decision 2003/568/JHA, or corruption as defined in the applicable law;

(iii) conduct related to a criminal organisation, as referred to in Article 2 of Council Framework Decision 2008/841/JHA;

(iv) money laundering or terrorist financing within the meaning of Article 1(3), (4) and (5) of Directive (EU) 2015/849 of the European Parliament and of the Council;

(v) terrorist offences or offences linked to terrorist activities, as defined in Articles 1 and 3 of Council Framework Decision 2002/475/JHA, respectively, or inciting, aiding, abetting or attempting to commit such offences, as referred to in Article 4 of that Decision;

(vi) child labour or other offences concerning trafficking in human beings as referred to in Article 2 of Directive 2011/36/EU of the European Parliament and of the Council;

(e) the applicant has shown significant deficiencies in complying with main obligations in the performance of a contract, a grant agreement or a grant decision financed by the Union's budget, which has led to its early termination or to the application of liquidated damages or other contractual penalties, or which has been discovered following checks, audits or investigations by an authorising officer, OLAF or the Court of Auditors;

(f) it has been established by a final judgment or final administrative decision that the applicant has committed an irregularity within the meaning of Article 1(2) of Council Regulation (EC, Euratom) No 2988/95;

(g) it has been established by a final judgement or final administrative decision that the applicant has created an entity in a different jurisdiction with the intent to circumvent fiscal, social or any other legal obligations of mandatory application in the jurisdiction of its registered office, central administration or principal place of business;

(h) it has been established by a final judgement or final administrative decision that an entity has been created with the intent referred to in point (g);

(i) for the situations referred to in points (c) to (h) above, the applicant is subject to:

(i) facts established in the context of audits or investigations carried out by European Public Prosecutor's Office after its establishment, the Court of Auditors, the European Anti-Fraud Office or the internal auditor, or any other check, audit or control performed under the responsibility of an authorising officer of an EU institution, of a European office or of an EU agency or body;

(ii) non-final judgments or non-final administrative decisions which may include disciplinary measures taken by the competent supervisory body responsible for the verification of the application of standards of professional ethics;

(iii) facts referred to in decisions of persons or entities being entrusted with EU budget implementation tasks;

(iv) information transmitted by Member States implementing Union funds;

(v) decisions of the Commission relating to the infringement of Union competition law or of a national competent authority relating to the infringement of Union or national competition law; or

(vi) decisions of exclusion by an authorising officer of an EU institution, of a European office or of an EU agency or body.

7.2. Remedial measures[13]

If an applicant declares one of the situations of exclusion listed above, it should indicate the measures it has taken to remedy the exclusion situation, thus demonstrating its reliability. This may include e.g. technical, organisational and personnel measures to prevent further occurrence, compensation of damage or payment of fines. The relevant documentary evidence which illustrates the remedial measures taken must be provided in annex to the declaration. This does not apply for situations referred in point (d) of section 7.1.

7.3. Rejection from the call

The Executive Director of the EuroHPC JU shall not conclude a hosting agreement with an applicant who:

    a. is in an exclusion situation established in accordance with section 7.1;

    b. has misrepresented the information required as a condition for participating in the procedure or has failed to supply that information.

The same exclusion criteria apply to affiliated entities.

Administrative sanctions (exclusion) may be imposed on applicants, or affiliated entities where applicable, if any of the declarations or information provided as a condition for participating in this procedure prove to be false.

7.4. Supporting documents

Applicants and affiliated entities must provide a declaration on their honour certifying that they are not in one of the situations referred to above under 7.3., by filling in the relevant form attached to the

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[13] Article 136 (7) FR.

application form accompanying the Call for Expression of Interest and available at [*https://eurohpc-ju.europa.eu/participate.html*].

8. EVALUATION CRITERIA

The following sets of evaluation criteria will be used for the different parts of an eligible application submitted under the present Call for Expressions of interest:

- *Evaluation criteria for the "new or the upgraded AI EuroHPC supercomputer".*
- *Evaluation criteria for the "Advanced Experimental AI-optimised Supercomputing Platform".*
- *Evaluation criteria for the "AI Factory".*

The above sets of evaluation criteria are described below.

8.1. Evaluation criteria for the "new or the upgraded AI EuroHPC supercomputer"

Applicants should describe in detail the targeted specifications and features of their new or their upgraded AI EuroHPC supercomputer and associated facilities. This part of the application will be evaluated according to the evaluation criteria listed, *inter alia,* in Articles 9(5) and 15(3) of the Regulation:

a. **General system specifications (0-10 points)**

o Quality and pertinence of new or upgraded supercomputer's general system specifications (including compute, storage, connectivity, etc. as set out in detail in the Concept Paper appended as Annex 3 to this call) targeted in the application, taking into account the needs of the AI users. As specifically per the upgrade, justification for the pertinence of this upgrade when considering the needs of the AI users, the compatibility with the original EuroHPC supercomputer, and indicating how this will increase the operational capacity performance of the supercomputer.

o Soundness and maturity of the system architecture concept, and credibility of the application.

o Quality and pertinence of the proposed AI/ML benchmarks (e.g., HPL-MxP, MLPerf) to be used for the evaluation of the computing capacity of the supercomputer.

o Pertinence of and extent to which the proposed AI/HPC software ecosystem (including software stacks, platforms, libraries, workflows, etc.) to be provided by the hosting entity is comprehensive, scalable for AI development and for HPC and is preparing the next generation of complex AI applications.

b. **Proximity with an established datacentre, or connection to it via very high-speed networks (0-10 points)**

o Demonstration that the connectivity of the data centre is sufficient for ultra-fast data access by the supercomputer.

c. **Estimation of total cost of ownership (TCO) of the supercomputer (0-10 points)**

o Clarity and effectiveness of the estimated TCO of the acquisition and operational costs of the supercomputer.

o Quality and pertinence of the methodology to calculate the TCO.

d. **Experience of the hosting entity in installing and operating similar systems (0-10 points)**

o Quality and pertinence of experience of the hosting entity in installing and operating similar systems.

o Extent to which the provided experience is sufficient for supporting the system targeted.

e. Quality of the hosting facility's physical and IT infrastructure, its security and its connectivity with the rest of the Union (0-10 points)

o Quality and credibility of the implementation plan for acquiring and deploying the supercomputer.

o Quality and pertinence of the current and proposed hosting facility's physical and IT infrastructure, its security and its connectivity with the rest of the Union.

o Quality and effectiveness of the proposed plan for the readiness of the site to host the supercomputer.

f. Quality of service to the users, namely capability to comply with the service level agreement provided among the documents accompanying this selection procedure (0-10 points)

o Quality and pertinence of service to the users, namely capability to comply with the service level agreement provided in the application.

o Quality of the proposed coordination and/or support measures to ensure requested service level towards EuroHPC JU users.

Points will be allocated out of a total of 60 on the basis of the above-specified weighting. A minimum threshold of 5 points for each criterion and 35 points for the total will be applied. Applications below these thresholds will be rejected.

For each criterion, if appropriate, applicants must provide detailed information about the role and tasks to be carried out by each consortium member.

8.2. Evaluation criteria for the "Advanced experimental AI-optimised supercomputing platform" (Optional)

Applicants may include in their application an optional system/partition targeting the development of an advanced experimental AI-optimised supercomputing platform. The goal of such a platform shall be to provide an exploratory supercomputing infrastructure for the development, integration, testing, and co-design of a wide range of European technologies suitable to be part of the new or the upgraded AI EuroHPCsupercomputer.

This optional part will be evaluated according to the following evaluation criteria (based, *inter alia*, on the list of criteria provided for in Article 28 of the Horizon Europe Regulation):

a. Excellence (0-5 points)

o Clarity and pertinence of the project's objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art.

o Soundness of the proposed methodology.

b. Impact (0-5 points)

o Credibility of the pathways to achieve the expected outcomes and expected impacts.

o Suitability and quality of the measures to maximise expected outcomes and impacts.

c. Quality and efficiency of the implementation (0-5 points)

o Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.

o Capacity and expertise of the consortium.

Points will be allocated out of a total of 15 on the basis of the above-specified weighting. A minimum threshold of 3 points for each criterion and 10 points for the total will be applied. For this optional part, applications below these thresholds will be rejected.

The evaluation of this optional part will not have any impact on the overall score of the application, i.e., the evaluation of this part will be considered separately and will not affect the final ranking or selection of applications regarding the other parts of this Call for Expression of Interest.

8.3. Evaluation criteria for the "AI Factory"

Since AI Factories will further reinforce the EU's AI ecosystem by bringing together computing infrastructure and storage facilities, data, support tools, AI algorithms, and talent in a 'one stop shop'[14], which will become essential for AI startups, researchers, and innovators, it becomes necessary that applicants describe i) the AI ecosystem they aim to target, as well as ii) what features their 'AI Factories' will have in terms of activities and services.

The evaluation criteria for this part of the application are based, *inter alia*, on the list of criteria in Article 9(5) of the Regulation, as well as the additional criteria that are presented in the concept paper on "AI Factories" described in Annex 3 of this Call for Expressions of Interest. The evaluation criteria are as follows:

a. **Vision, plans and capability of the hosting entity to address the challenges of the Artificial Intelligence start-up ecosystem, and research and innovation ecosystem and the Artificial Intelligence user community and providing a supportive centralised or distributed Artificial Intelligence-oriented supercomputing service *(0-10 points)***

o Clarity and pertinence of the AI Factory overall concept, in terms of vision, rationale, objectives, development roadmap, targeted key industry sectors and stakeholders, internal or external cloud solutions planned to bridge the needs towards an end-to-end computing continuum, and networking with other initiatives.

o Clarity and pertinence of the AI Factory data facilities, access to data, confidentiality

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[14] The provision of AI factories services may be implemented in a distributed manner by different partners from the selected hosting entity/consortium of Participating States.

and integrity of data.

- o Pertinence of the links of the AI Factory to a national AI Strategy, national data and access policies to computing and data, and to a national strategy for investing in startups/SMEs.

- o Quality and efficiency of the Implementation Roadmap, including its deliverables and milestones, the risk management approach and the Key performance Indicators.

- o Clarity and pertinence of the plans to invest in physical and virtual infrastructure required for the AI Factory.

- o Soundness of the budget of the AI Factory.

- o Credibility of the pathways to achieve the expected outcomes and expected impacts.

- o Suitability and quality of the measures to maximise expected outcomes and impacts.

b. Quality and pertinence of experience and know-how available at the intended team that would be in charge for the supportive Artificial Intelligence-oriented supercomputing service environment (0-10 points)

- o Quality and pertinence of experience and know-how available at the intended team that would be in charge for the supportive Artificial Intelligence-oriented supercomputing service environment.

- o Quality and pertinence of the AI Factory user support services, including the quality and efficiency of the plan for offering professional services.

- o Quality and pertinence of the AI Factory tools and software and application development environments.

c. Plans for interaction and cooperation with other Artificial Intelligence Factories, with EuroHPC Competence Centres and EuroHPC Centres of Excellence and with relevant Artificial Intelligence activities such as the hubs of Artificial Intelligence start-ups, 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 (0-10 points)

- o Quality and pertinence of the AI Factory Hub.

- o Clarity and pertinence of the networking activities of the AI Factory with existing European and national initiatives and with other EuroHPC AI Factories.

- o Soundness of the plans for developing Trustworthy AI.

d. Existing capabilities and future plans of the hosting entity to contribute to the development of the talent pool (0-10 points)

- o Pertinence and effectiveness of existing capabilities and future plans of the hosting entity to contribute to the development of the talent pool.

- o Quality and pertinence of structured training facilities and training programmes highlighting relevant courses, activities, and learning pathways tailored to meet the diverse needs of potential users.

o Quality and pertinence of strategy to foster collaboration and engagement with universities, research centres and other training providers to train and equip students at all levels with the necessary in-demand AI skills.

> Points will be allocated out of a total of 40 on the basis of the above-specified weighting. A minimum threshold of 5 points for each criterion and 25 points for the total will be applied. Applications below these thresholds will be rejected.

9. OVERVIEW OF THE EVALUATION AND SELECTION PROCEDURE

The EuroHPC JU is responsible for the implementation of the evaluation of the received expressions of interest. It shall organise the submission and evaluation procedures and communicates with the applicants.

9.1. Evaluation procedure

The submitted applications will be evaluated by a panel of a minimum of three and a maximum of five experts, depending on the number of applications received. These experts will be appointed by the EuroHPC JU on the basis of the procedures followed under Digital Europe Programme and Horizon Europe. For the applications considered admissible according to the section 5 above, the EuroHPC JU will assess the eligibility and exclusion criteria according to the sections 6 and 7 above. Only eligible applications will be evaluated.

- **Individual evaluations**: In the first step, the experts that sit on the panel shall carry out individually the evaluation of eligible expressions of interest on the basis of the evaluation criteria described in section 8 above. They give a score for each criterion, with explanatory comments. These individual reports form the basis of the further evaluation.

- **Consensus meetings**: After carrying out their individual assessment, all the experts that evaluated the application shall convene in a consensus meeting, to agree on a common position, including comments and scores, and prepare a consensus report. The consensus meetings shall be moderated by a Senior Officer of the EuroHPC JU who shall seek consensus, impartially, and ensure that all applications are evaluated fairly, in line with the relevant evaluation criteria.

- **Panel review:** The review panel shall be chaired by the Executive Director of the EuroHPC JU. The panel will review the scores and comments for all applications to check for consistency across the evaluations. If necessary, it will propose a new set of marks or revise comments, and resolve cases where evaluators were unable to agree. The panel will prepare an evaluation summary report. Only applications above threshold will be ranked by the review panel according to the evaluation criteria total score. If necessary, a priority order for applications with the same score will be determined in the ranked list, according to the following approach:

  Applications with the same score: Applications with the same total score will be prioritised according to the scores they have received for the evaluation criterion "AI Factory" (see section 8.3 above).

9.2. Selection

In order to consider that applicants may target a new or an upgraded AI EuroHPC supercomputer; two separate ranking lists will be established respectively. In each of these ranking lists, the evaluation of the new or the upgraded AI EuroHPC supercomputer will consist of the weighted addition of the "new or upgraded AI EuroHPC supercomputer" evaluation criterion (50% weighting) and of the "AI Factories" evaluation criteria (50% weighting).

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The Executive Director of the EuroHPC JU will review the results of the evaluation panel and will draw one final ranking list that merges the two above mentioned ranking lists based on the two separate lists proposed by the panel.

This final ranking list shall consist of a ranked list with the applications to be selected as hosting entities as proposed by the panel complemented by any suggestion for deviation from this list as proposed by the Executive Director. In addition, the EuroHPC JU will prepare a list with applications that did not pass the evaluation thresholds or were found to be ineligible.

The Executive Director will submit the final ranking list, together with the Evaluation Summary Reports, to the Governing Board of the EuroHPC JU with a proposal for selection of the Hosting Entities for their approval.

The Governing Board will make the final selection of the Hosting Entities, which will be invited to establish or amend a hosting agreement with the EuroHPC JU.

After the decision of the Governing Board, all applicants will be informed in writing by the EuroHPC JU of the outcome of the evaluation in the form of an Evaluation Summary Report (ESR). The EuroHPC JU will also inform about the final selection or rejection of applications.

The EuroHPC JU will invite the selected applicant for the signature of the new or amended hosting agreement, and the preparation of the acquisition of the new or upgraded AI EuroHPC supercomputer, but the invitation is not a commitment that the EuroHPC JU will launch the acquisition procedure. The hosting agreement or its amendment shall be approved by the Governing Board before its signature by the respective parties.

9.3. Communication

The information contained in the present call document provides all the information required to submit an application. Please read it carefully before doing so, paying particular attention to the priorities and objectives of the present call.

All enquiries must be made by e-mail only to: info@eurohpc-ju.europa.eu

Questions shall be sent to the above address no later than the **6 days before the respective and subsequent cut off dates - 13:00 Luxembourg time –** as defined in Section 10.

The EuroHPC JU has no obligation to provide clarifications to questions received after this date.

Replies will be given/published no later than the "Publication of the last answers to questions" defined in the timeline in section 10.

To ensure equal treatment of applicants, the EuroHPC JU will not give a prior opinion on the eligibility of applicants, or affiliated entity(ies), an action or specific activities.

No individual replies to questions will be sent but all questions together with the answers and other important notices will be published (FAQ in EN) at regular intervals on the website under the relevant call: [*https://eurohpc-ju.europa.eu/participate/calls_en.]*

The EuroHPC JU may, on its own initiative, inform interested parties of any error, inaccuracy, omission or clerical error in the text of the Call for Expression of Interest on the mentioned website. It is therefore advisable to consult this website regularly in order to be informed of any updates and of the questions and answers published.

No modification to the applications is allowed once the deadline for submission has elapsed. If there is a need to clarify certain aspects or to correct clerical mistakes, the EuroHPC JU may contact the applicant for this purpose during the evaluation process. This is generally done by e-mail. It is entirely the responsibility of applicants to ensure that all contact information provided is accurate and functioning.

In case of any change of contact details, please send an email with the application reference and the new contact details to info@eurohpc-ju.europa.eu

In the case of hosting consortia, all communication regarding an application will be done with the lead applicant only, unless there are specific reasons to do otherwise, where the consortium coordinator should be in copy.

Applicants will be informed in writing about the results of the selection process at the latest 2 months after the cut-off date. Unsuccessful applicants will be informed of the reasons for rejection. No information regarding the award procedure will be disclosed until the notification letters have been sent to the relevant applicants.

10. TIMETABLE

The steps and indicative times for the procedure from publication to expected start of the mandate for the selected Hosting Entities are in the table below:

Selection of HE milestones	Date and time or indicative period
Call for Expression of Interest Publication	
Publication of Call for Expressions of Interest	**10 September 2024**
Information sessions	**Calendar week 39**
Submission of applications	
Deadlines to submit questions about the Call	**25 October 2024 – 16:00 (Luxembourg time)** **and subsequently 6 days before the further cut-off dates**
Call Deadline / Cut-off dates	**04 November 2024 – 17:00** **01 February 2025 – 17:00** **02 May 2025 – 17:00** **(Luxembourg times)** **and subsequently every 3 months with last cut-off date being the 31st of December 2025**
Notification of the selection decision	**Within 2 months of the cut-off date**

11. PROCEDURE FOR THE SUBMISSION OF APPLICATIONS

Applications for the first call must be sent no later than the 4 November 2024 at 17:00 Luxembourg time, and subsequently every 3 months (see table in section 10).

Application forms are available at [*https://eurohpc-ju.europa.eu/participate/calls_en*]

Applications must be submitted in the correct form, duly completed and dated. They must be submitted in 3 (three) copies (one original clearly identified as such, plus two copies, and an electronic copy on USB stick) and signed by the person authorised to enter into legally binding commitments on behalf of the applicant organisation. The electronic version must contain only the pdf versions of the application presented in paper. Other electronic files will not be considered.

Applications must be submitted in a sealed envelope itself enclosed within a second sealed envelope, addressed as indicated below. The inner envelope must bear, in addition to the address indicated below, the words, "CALL FOR EXPRESSION OF INTEREST - **EUROHPC-2024-CEI-AI-02** – Not to be opened by the mail service". If self-adhesive envelopes are used, they must be sealed with adhesive tape and the sender must sign across that tape.

Where applicable, all additional information considered necessary by the applicant can be included on separate sheets.

Applications must be sent to the following address:

European High Performance Computing Joint Undertaking
Drosbach Building (DRB) - Wing E – 1st floor
12E rue Guillaume Kroll
L-2920 Luxembourg

- by post, date of postmark as proof of timely submission;

- in person, date of receipt, to the address above.

- by courier service[15], date of receipt by the courier service as proof.

Applications sent by fax or e-mail will not be accepted.

Contact point for any questions is[16] *info@eurohpc-ju.europa.eu*

All applications will be treated confidentially, as well as any submitted related information, data, and documents. The EuroHPC JU will ensure that the process of handling and evaluating applications is carried out in a confidential manner.

External experts are also bound by an obligation of confidentiality.

Applicants should avoid taking any actions that could jeopardise confidentiality. They must not attempt to discuss their application with persons they believe may act as expert evaluator for the EuroHPC JU.

Your application should not contain any information that is 'EU classified' under the rules on security of information in the Commission security rules for protecting EU classified information (see also Classification of Information in DEP projects).

The EuroHPC JU will process personal data in accordance with Regulation (EU) 2018/1725 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[17].

Once the coordinator (or sole applicant) has submitted an expression of interest, an acknowledgement of receipt will be sent by the JU. No other interaction will take place with the EuroHPC JU until the application has been evaluated, unless:

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[15] When using the courier services, please use the following postal code: *L-1882 Luxembourg.*

[16] Questions on submission must be sent before the deadline indicated in section 10.

[17] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018R1725

– The EuroHPC JU needs to contact you (usually through the coordinator) to clarify matters such as eligibility or to request additional information.

The list of Annexes included as part of this call is:

– Annex 1: Application form (please fill in the application form, including its annexes, and provide the relevant supporting documents – all listed below) which includes the checklist for applicants at the end of the application form and the following annexes:

  o Annex 1A Declaration of honour

  o Annex 1B Mandate letters (if applicable)

  o Other supporting documents to be provided where applicable: see checklist for applicants

– Annex 2: Indicative List of cost elements to consider in the calculation of the operating costs

– Annex 3: "AI Factories" Concept Paper

– *Annex 4: Model Hosting Agreement – when available*

– Template for Advanced Experimental AI-optimised Supercomputing Platform

Regarding the compilation of the application file, it is recommended to:

– follow the order of documents as listed in the checklist (and attach a ticked checklist as below to the application);

– print the documents double-sided;

– use 2-hole folders (do not bind or glue; stapling is acceptable).

12. ANNEX 1: CONTENT OF THE APPLICATION

12.1. Structure of the Application

Applicants must use the application form template for their applications (designed to highlight important aspects and facilitate the assessment against the evaluation criteria).

The application form is structured in two main sections.

In the first section, "Information on the applicants", the application must provide administrative details about the applicants and the consortium, including contact details and legal representatives.

The second section "Information on the Action" is divided in six subsections:

- In the first subsection "*overall description of the application*", the Applicants should provide an overall description of their proposal for developing an AI Factory and its different constituent parts.

- In the second subsection "*Description of the General system specifications*", the Applicants should spell out how the general system specifications will be met, for both the new or the upgraded AI EuroHPC supercomputer and the site, including the associated data centre. This subsection is further including the following:

o "***Description of the Total Cost of Ownership***", the Applicants should include an estimation of the total cost of the acquisition and operations of the new or the upgraded AI EuroHPC supercomputer that the applicant has in mind to host and that has been described in the previous section "general system specifications". Applicants should provide a clear breakdown of system acquisition and operational costs summarising them in two respective tables. Provided cost estimates should not include VAT.

o "***Description of the Experience of the hosting entity in installing and operating similar systems***", the Applicants should provide information on their experience in installing and operating similar systems.

o "***Description of the quality of the hosting facility's physical and IT infrastructure, its security and its connectivity with the rest of the Union***" the Applicants should describe their plans for acquiring and deploying the supercomputer, as well as information on the hosting physical and IT infrastructure, including security and connectivity that the site can provide for this supercomputer. In the next subsection, applicants should describe all their necessary AI factories related aspects.

o "***Description of the Quality of service to the users, namely capability to comply with the service level agreement***", the Applicants should provide information on the benchmarks and/or deliverables they will employ to achieve the required quality of service and targets set to serve the users of the supercomputer.

- In the third subsection "***Description of the "advanced experimental AI-optimised platform***" (optional), the Applicants may decide to include in their application an optional system/partition targeting the development of an advanced experimental AI-optimised supercomputing platform.

- Finally, in the fourth and last subsection "***Description of the AI Factory***", the Applicants should present a comprehensive overview of the AI ecosystem they would serve and enhance through the AI Factory and the detailed of services they would offer to this ecosystem.

All the above are further detailed in the following subsections.

Should an applicant apply for an advanced AI-optimised experimental platform, they should fill in the enclosed Horizon Europe template (See Annex X).

The application form includes a guide on how to fill it for all sections.

Character and page limits:

  – page limit: 200 pages

  – minimum font size — Arial 8 points

  – page size: A4

  – margins (top, bottom, left and right): at least 15 mm (not including headers & footers).

  – pagination instructions: each document from the application must be individually numbered in the bottom right corner.

12.2. Overall description of the application

In this section of their application, the Applicants should provide a comprehensive overall description of their proposal and its constituent parts. The application should demonstrate how the AI Factory will

advance AI capabilities in Europe, support innovation and deliver significant value to AI stakeholders, while respecting ethical and regulatory standards.

The following are expected to be described with the required level of detail – please also refer to Annex 3 of this Call for Expression of Interest, "AI Factories" concept paper:

a. A comprehensive description of the concept of the proposal and the needs for an AI Factory

1) *Concept of the AI Factory*
   a) *Vision, Rationale and Objectives* of the proposed AI Factory.

   b) *A roadmap* for developing the national AI ecosystem(s) and how that would be served, justifying the need for setting up the AI Factory.

2) *Targeted key Industrial sectors and Applications and targeted Stakeholders and their needs*:
   a) description of the *key industrial/application sectors* as well as of the key obstacles to overcome to further develop the AI innovation ecosystem in these sectors.

   b) description of a convincing plan for attracting such key AI stakeholders from these sectors.

   c) Description of any plans the Applicants may have to include *internal or external cloud solutions* to bridge the needs towards an end-to-end computing continuum.

3)*Overall plan for investing in a new or an upgraded AI EuroHPC supercomputer and in physical and virtual infrastructure required for the AI factory*, including an overall description of the computing, networking and data resources as well as investments in human capital that will be required to address the needs of the AI ecosystem.

2) *Links to a national AI strategy, and national data and access policies to computing and data*:

   a) description of how the AI Factory proposal is linked to the national AI Strategy / Strategies or equivalent[18] of the Applicant(s).

   b) Description of how the AI Factory is linked to a current *National Data Policy* of the hosting entity or the hosting consortium, enabling access to large datasets. If this does not exist, description of a plan to make available large data sets to the AI Factory ecosystem.

   c) Description of an *AI user-friendly access policy of the AI Factory* to the national share of computing time of the EuroHPC supercomputer and how it will contribute to the development of the national AI Ecosystem.

3) *Overall plan for networking the AI Factory with existing European and national AI initiatives and with other EuroHPC AI Factories.*

4) *Overall plan for linking the AI Factory to a national strategy for startups/SMEs:* description of the plans the Applicants have for linking the AI Factory ecosystem with relevant national/regional investment measures targeted at startups and SMEs.

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[18] In the absence of a formal national AI strategy, the Applicants will need to describe the strategic national (or Consortium) character of their AI Factory approach.

12.3. Description of the "General system specifications"

The application should provide detailed architectural description of the targeted system, analysing the rationale behind the system design. This concerns both the new and the upgraded AI EuroHPC supercomputer. The analysis should include the expected aggregated performance of the proposed system, describing the benchmarks to be used for its evaluation, providing justification for their selection.

The proposed architecture is expected to rely on mature technology solutions which are either already available in the market **or foreseen for public availability within a timeframe of 6 months from the day of application submission**.

The application should also analyse the security and confidentiality requirements of the application domain and incorporate in the system architecture the technology solutions, coupled with the necessary procedures and policies, that together will ensure that these security requirements are met.

The hosting site should comply with at least the following requirements:

- Power capacity and power quality appropriate for the operation of the proposed supercomputing system. UPS power available to cover the critical systems including storage and access to data of the proposed system.

- Adequate capacity of air or liquid cooling for hosting the proposed system.

- 100 Gbit/s connectivity towards the rest of the GEANT Network (link capacity).

- Co-location or high-speed connectivity to at least one associated data facility.

- Hosting physical security.

- Hosting fire mitigation equipment/procedures.

- Hosting IT access security.

- On call service support teams for IT issues.

- Dedicated on-call service team for facilities issues.

- Regularly measure the satisfaction of the users with the service via a user survey.

A detailed description of the proposed system and hosting site, covering features such as:

- Detailed description of the site hosting the system.

- Description of the main features of the targeted supercomputer system, including, e.g.:

    o Number of partitions.

    o Main processing elements (CPU, GPUs, IPUs, FPGAs, etc).

    o AI-optimised architecture and features.

    o Type of nodes and their configuration (e.g., accelerated, CPU-only, High memory, etc.).

    o Memory and storage capacities and architecture (e.g., high-capacity storage, high-speed storage, etc.).

- o   Ratio of different node types within the system (accelerator/CPU, memory size, etc.).

- o   Network capacities and architecture (e.g., interconnect, external connectivity, etc.).

- Expected sustained performance per partition and aggregated (AI-oriented benchmark and/or other performance indicators).

- Acceptance tests and benchmarks to be used for the acceptance of the supercomputer.

- Description of how management of specific needs of users for their owned software licenses, for example hosting a dedicated license server, license transfer or channelling of already in-use software licenses will be addressed.

- Other related software/services (containers, virtualisation, support of workflows, workflow management…), in particular:

  - o   frameworks to allow the automation of AI model training lifecycle.

  - o   resource provisioning mechanisms to provide multi-tenancy environments.

Description of the "Total Cost of Ownership (TCO)"

The applicant should include an estimation of the cost of the new or the upgraded AI EuroHPC supercomputer that the applicant has in mind to host and that has been described in the previous section "general system specifications".

The estimation of the TCO will be based on an estimation of the acquisition costs of a potential system that complies with the general system specifications and on an estimation of its operating costs. The costs related to the construction of the hosting site per se (i.e., the costs related to the building infrastructure that will host the supercomputer, etc.) shall not be covered by the EuroHPC JU. The costs of the preparation and adaptation of the hosting site incurred by the hosting entity that can be directly accounted to the supercomputer may be considered as part of the TCO.

Applicants must provide their intention with regards to the duration of the operations of the supercomputer in the hosting entity. This should include not only their proposal for the duration of the operations, but their preference for the ownership of the supercomputer once the operations are finished (e.g. buy it, decommissioning it …).

Site preparation

The hosting entity must be able to meet the baseline requirements set out herein in time for the anticipated timeline for the delivery of the supercomputer. The applicant must provide a plan of how and in what timeline the applicant intends to realise the construction of a new or the upgrade of an existing site, including costs of each action (indicating the ones that will be considered as in-kind contribution) and the definitive date at which the site will be ready for the installation of the EuroHPC system.

Acquisition Costs

Applicants must detail the estimation for the cost of the acquisition of the supercomputer. Applicants must indicate clearly what costs will be included in this category, how they will calculate them and who will pay for those.

Operating Costs

Applicants must provide an auditable methodology to calculate and to verify the operating costs of the supercomputer for the duration of the action. Applicants must describe the model that will be used for

calculating the costs of the Operational expenditures (OPEX), detailing the cost elements included in the model and providing estimates for each cost.

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 supercomputers and any national or regional supercomputing systems it operates. The applicants must explain the way the supercomputer shares its IT environment and storage.

The method should be used in the grant to calculate the operating costs and the amount that will be covered by Union's contribution. Applicants can use the indicative list of cost elements provided in Annex 2 to consider in the calculation of the operating costs.

Applications must include at least the following information and/or estimations:

1. Average power usage effectiveness (PUE) for the current data centre over the last 12 months[19]. And, in the case that the applicant would be upgrading the site to host the supercomputer, what is the planned (design specification) PUE for your upgraded data centre[20].

2. Depreciation time for the building, technical building infrastructure and IT investments and method used for the depreciation of the assets (e.g. linear).

3. Average cost of IT on-call service (internal or outsourced) over the last 12 months.

4. Current electricity price in EUR/kWh (all taxes included) and if available, electricity price in EUR/kWh (all taxes included) at the expected installation time of the supercomputer.

5. Number of system administrators (FTE) expected to dedicate to the running of the supercomputer service (including critical auxiliary services such as storage, scheduling system, etc.), including average Person Month cost.

6. Number of user support staff (FTE) expected to dedicate to the running of the users of the supercomputer and application support including average Person Month cost.

7. Number of technical support staff (FTE) expected to dedicate for an Application Support Team including average Person Month cost.

8. IT environment including storage (disks, tapes ...) architecture, capacities and their ability to be extended to serve the supercomputer.

Description of the "Experience of the hosting entity in installing and operating similar systems"

Applicants must provide information of their experience in installing and operating supercomputers and dedicated high performance storage facilities, including at least:

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[19] The calculation of the PUE provided must be based on the method defined by ASHRAE Technical Committee 9.9 as set out in their publication "PUE: A Comprehensive Examination of the Metric". PUE = Total Facility Energy / IT Equipment Energy (Note: JU reserves the right to check this value).

[20] The estimated of the PUE provided must be based on the method defined by ASHRAE Technical Committee 9.9 as set out in their publication "PUE: A Comprehensive Examination of the Metric". PUE = Total Facility Energy / IT Equipment Energy.

1) Previous experience with installing and operating supercomputers. Provide information in case the applicant's site has experience in hosting very early releases of new systems. If relevant, applicants must provide documentation of their experience in having installed systems in the last 5 years (especially systems that ranked in the top 50 positions of the Top500 at the time of their first listing).

2) In the case of installing and operating a supercomputer for a 3rd party (the supercomputer is owned by a 3rd party and operated for them as agreed in the relevant Service Level Agreement, SLA) or operating a supercomputing service or equivalent major infrastructure for a 3rd party (3rd party pays for a service based on a SLA, the supercomputer is owned by the hosting entity); applicants must provide a description of the service provided as well as at least one contact person from the 3rd party from whom the JU may request a reference for this service.

3) Description of the current organizational structure and the teams of people responsible for the supercomputer operation and management (including user support and specialist support of the HPC systems). If available, include current procedures and tools for system management, help desk project management, configuration management, training and education put in place.

4) Description of the current procedures adopted by the supercomputing operation and management team to monitor HPC systems. Please indicate which of these are these are in-house and which are 3rd party solutions; how they have been integrated and customized. List any current Quality Control certifications your organization has obtained for system management, help desk project management, configuration management, training and education.

5) Description of the current procedures adopted by the supercomputing operation and management team to trace and resolve issues and communicate them to users and other stakeholders. Include description of current procedures adopted by the supercomputing operation and management team to ensure that service level agreements are met.

6) Description of any current continuity procedures the operations team or the Network Operations Centre (NOC) has in place and description of current workload management software and methodology (bonus/malus; backfill; etc.) in place.

7) Description of previous experience in providing supercomputer access and other related services to users from other Member States or pan European environments.

Description of the "Quality of the hosting facility's physical and IT infrastructure, its security and its connectivity with the rest of the Union"

Applicants must provide information of the hosting physical and IT infrastructure, including security and connectivity that the site can provide for the new or the upgraded AI EuroHPC supercomputer. JP/JC

Applicants must also provide a detailed plan of how and in what timeline they intend to realise the upgrade of the site, including the planned date at which the site will be ready for the installation of the supercomputer. This may include, but is not limited to Gantt charts, contractual timelines, construction permits and work contracts status.

For the preparation of the hosting site and the launch of the procurement and delivery of the new or the upgraded AI EuroHPC supercomputer, the hosting entity must be able to meet the baseline requirements set out herein in time for an accelerated delivery of the new or the upgraded AI supercomputer that will be used for the AI Factory. For this, the procurement of the new or the upgraded AI supercomputer shall be launched at the latest within three months after the date of notification of the selection decision by the JU to the hosting entity or hosting Consortium under this call and begin installation of the procured

system at the latest six months after its procurement date, and swiftly start operations of the full procured system.

Applicants should include (at least) the following information related to the current and proposed capacities of the hosting facility and how to achieve them:

1) Description of the intended hosting entity site and facility, including cooling methods and experience on cooling systems, power measurement facilities, accessibility, possibility to accommodate visitors, courses, possible extendibility of the site (m² and KW) and description of physical security concept, including access control, CCTV, etc.

2) Power measurement facilities in place at infrastructure level and where (device type, location of measurement at rack, PDU, centre) and maximum levels of energy measurement according to the EE HPC Power Measurement Methodology. If available, reference to any memberships of energy efficiency interest groups or codes of conduct (e.g. EE HPC WG, EU Code of Conduct, EMAS, or other); certifications for energy efficiency and sustainability (e.g. ISO / IEC 13273).

3) Information about the connection to the power grid, including maximum capacity of connection to the power grid and other characteristics such as redundant connection to the power grid. Information about power grid quality (number of outages from supplier in last 48 months,) and energy procurement method (e.g., long-term contracts, annual market-based purchases, other).

4) Information about availability of the data centre: expressed as a minimum percentage of uptime or in maximum number of hour's downtime that the hosting entity deem are acceptable per year. Average availability of data centre infrastructure (cooling, power, etc.) (over the last 24 months for current)[21].

5) Information about connectivity towards the rest of the GEANT Network (link capacity) and the Network Operating Centre (NOC) and its reachability (e.g. 24/7).

6) Facility managers (in-house or outsourced) involved in ensuring the operation of the data centre, and their specialization.

7) Total memory and storage capacities of the centre, defining what part would be dedicated to the supercomputer.

Description of the "Quality of service to the users, namely capability to comply with the service level agreement"

The applicant should specify the benchmarks or deliverables which the applicant intends to employ to achieve the expected results and targets and how they will be used. These should include at least the SLAs in the Hosting Agreement and information related to:

1) Access time accounting model that will be used to control the allocation time of the supercomputer. Provide historic system uptake and usage for recent HPC systems.

2) Availability of main HPC systems over last 12 months if the system has been operational for at least 18 months. If the system has been operational for less, please provide availability numbers

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[21] Facility is deemed available when no facility issues are affecting the running of the supercomputing service. Availability = total hours – (scheduled + unscheduled downtime).

based on the duration for which the system has been in full production. This should include hours of scheduled maintenance and hours of unscheduled maintenance.

3) Availability of helpdesk; number of active projects currently supported. Description of services provided by user support (e.g. 1st level, 2nd level, application support) and of policy regarding response times for level 1, 2 and 3 tickets[22].

4) Description of how the on-call service for the supercomputing service and infrastructure facilities are set up and work. Include, if available, results from the user satisfaction surveys for your site for the last 5 years.

5) Fraction of time for which the current supercomputing service (supercomputer + all necessary auxiliary services like storage, network, login nodes, etc. + main software services like scheduler, access to file systems, etc.) has been available over the last 12 months[23].

6) Do you perform regular regression tests to assess the stability of performance of your current supercomputer service? If yes, please provide a description of the regression test used and the frequency at which it is run.

7) Does your site provide any additional services that may not be critical to running the supercomputing service but may provide an additional benefit to the end user? If yes, please provide a description of these services.

Applicants must provide details on how these tasks are currently done and how they propose to achieve them for the hosting of the supercomputer. Applicants must indicate subcontracted action tasks (if any) and explain the reasons why (as opposed to direct implementation).

12.4. Description of the "advanced experimental AI-optimised platform" (optional)

One of the targets of EuroHPC JU is also promoting the further development of European technologies and thus contributing to developing a competitive European technology supply industry. As part of this objective, it is proposed that interested hosting entities may also include in their application an optional system/partition targeting the development of an advanced experimental AI -optimised supercomputing platform.

The goal of such a platform shall be to operate an exploratory supercomputing infrastructure for the development, integration, testing, and co-design of a wide range of European technologies suitable to be part of the supercomputer.

In case the hosting entity decides to include such optional part in its application, the hosting entity should include:

> a. A description of the advanced experimental AI-optimised platform
> b. How it complements the new or the upgraded AI EuroHPC supercomputer
> c. The development targets (milestones)
> d. The time plan as well as a detailed work plan

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[22] Level 1 => simple request, can be solved in 1 day; Level 2 => more complex request, requires some research, can take up to 5 working days to resolve, Level 3 => request that requires vendor response to resolve, may take longer than 5 working days.

[23] Available = fully up and running and reachable by the users and at least 98% of compute nodes available.

e. The cost breakdown

The potential of the advanced experimental AI-optimised platform, as well as its duration, should be duly justified in the application and will be evaluated on its own merits for receiving or not financial support. This evaluation shall not affect the overall evaluation of the other aspects of the application.

12.5. Description of the "AI Factory"

In this section the Applicants should provide a detailed description of the AI Factory and the services it will offer, complementing the general description of their proposal as presented in Section 12.2 above.

Applicants should at least address the following – for more detailed information, Applicants should refer to the Concept Paper found in Annex 3 of this Call for Expressions of Interest:

a. A detailed description of the AI Factory data facilities and services and its networking with other AI Factories:

1) *AI Factory tools and services*

   o *Overview of the user support services*: This includes: (i) Description of the range of services that the AI Factory will provide to the AI ecosystem (e.g., guidance for using the HPC environment, adapting the computational tasks associated to the training and fine- tuning of the AI models and related inference activities to the HPC environment, etc.). (ii) Description of a plan for servicing private and public national users as well as users from other EuroHPC Participating States, which do not host an AI Factory. (iii) Description of the foreseen professional user support plan, describing the range of user support activities (i.e., how the AI Factory plans to engage with and serve the broader AI community – from startups, SMEs and large industry to academia and research institutions – and how will these professional services be provided). (iv) Description of the resources required for the AI Factory to provide a well-functioning user support service.

   o *Software and application development environments*: description of the software environment that the AI Factory will deliver, including ready-to-use set of AI-oriented tools containerized workloads and workflows, etc.

2) *Data facilities, access to data, confidentiality and integrity of data*

   o *Data facilities:* Description of the data repositories and data assets that the AI Factory plans to make available to the AI ecosystem.

   o *Access to Common European Data Spaces*, including preliminary agreements on the principles of an access and use, establishing relevant data repositories (e.g., Hugging Face).

   o *Plans for establishing secure and trusted environments,* for guaranteeing the confidentiality and integrity of sensitive data and for ensuring the integrity of computational processes.

3) *Trustworthy AI*: description of the plans the Applicants have for developing of robust guidelines and standards for AI algorithmic development aligned with the principles and requirements of the AI Act.

4) *AI Factory Hub facilities*

   o *co-working space facilities:* description of the plans the Applicants have for making available co-working space physical facilities, possibly complemented also by virtual working spaces.

- o *hosting facilities for AI students*: and description of the Applicants Plans for making available a physical campus hosting AI students located nearby or associated to the foreseen AI Factory.

5) *AI Factory training facilities*

- o *Skills plan*: Description of the AI Factory Skills Plan outlining the skills needed for the targeted AI stakeholders, including a description of a diverse range of training courses, complementary training facilities and activities and timelines tailored to the varying needs of potential users.

- o *Access to human capital*: in house and external direct access to the necessary human capital and talent to provide the necessary education/training activities planned. This includes plans for collaboration and engagement with universities to train and equip students at all levels with the necessary in-demand AI skills.

6) *Detailed plans for networking the AI Factory with existing European and national initiatives and with other EuroHPC AI Factories.*

- o *Networking with other existing European and national AI & HPC initiatives:* Detailed plans for linking the AI Factory with European and national AI and HPC initiatives such as TEFs, EDIH, National HPC Competence Centres, ALT-EDIC, or others, and to engage with them while avoiding duplication of efforts.

- o *Networking with other AI Factories*: Detailed plans for linking the AI Factory with other EuroHPC AI factories once they become operational in order to network, exchange best practice, share experiences, and avoid duplication of efforts.

b. A comprehensive description of the AI Factory Implementation Plan:

1) *Implementation Plan and risk management*: Applicants should provide an indicative implementation plan, an organisational structure and roles for the development, deployment and management of the AI Factory. They should also describe how the AI Factory will be developed, deployed, tested and running, with regards to the acquisition and deployment phases of the new or the upgraded AI EuroHPC supercomputer. Applicants should also include a risk management approach by identifying potential risks and mitigation strategies.

2) *Key performance indicators (KPIs)*: Description of a set of KPIs and metrics that the Applicant(s) will use to measure the contributions to the success of their AI Factory and associated AI ecosystem.

3) *Budget estimate of the proposal*: Applicants should provide an estimated budget the establishment of the AI Factory, including development, implementation and expected operational costs.

c. A comprehensive description of the expected Impacts of the AI Factory:

Applicants should describe the pathways to achieve the expected outcomes and expected impacts and the measures they will take for maximising these expected outcomes and impacts.

13. ANNEX 2: INDICATIVE LIST OF COST ELEMENTS TO CONSIDER IN THE CALCULATION OF THE OPERATING COSTS

In-kind contributions are marked with coloured fields.

Supercomputer and maintenance

Cost item	Verification	Method	Provider
HPC system	N/A procured by EuroHPC JU	N/A	
High Performance disks/Scratch Storage	N/A procured by EuroHPC JU	N/A	

Equipment and commercial software

Cost item	Verification	Method	Provider	
Site preparation	Invoice /Balance sheet	Fraction committed to the EuroHPC JU (JU)	Hosting site only	
Network at data centre level	Invoice /Balance sheet	Fraction committed to JU	Hosting site only	Related equipment
High Performance disks/Home Storage	Invoice /Balance sheet	Fraction committed to JU	Hosting site / others	Related equipment
Backup storage	Invoice /Balance sheet	Fraction committed to JU	Hosting site / others	Related equipment
Level 2 storage/Long term Storage	Invoice /Balance sheet	Fraction committed to JU	Hosting site / others	Related equipment
Other IT equipment	Invoice /Balance sheet	Fraction committed to JU	Hosting site only	Related equipment
Supercomputers (SC) room	Invoice /Balance sheet	Fraction of the room occupied by the JU systems		
Building	Invoice /Balance sheet	Fraction of the building occupied by the SC room		
Power supply to the facility	Invoice /Balance sheet	Fraction of MW used by JU	Hosting site only	
Power backup	Invoice /Balance sheet	Fraction of MW used by JU	Hosting site only	
Power distribution	Invoice /Balance sheet	Fraction of MW used by JU	Hosting site only	
Cooling	Invoice /Balance sheet	Fraction of MW used by JU	Hosting site only	
Fire detection and extinction	Invoice /Balance sheet	Fraction of the surface of the SC room occupied by the JU systems	Hosting site only	Other infrast

Cost item	Verification	Method	Provider	
CCTV, security, access control	Invoice /Balance sheet	Fraction of the surface of the SC room occupied by the JU systems	Hosting site only	
Monitoring, building and facility	Invoice /Balance sheet	Fraction of MW used by JU	Hosting site only	
File system software	Invoice	Fraction of sw used by JU	Hosting site only	
Accounting software	Invoice	Fraction of sw used by JU	Hosting site only	
Compilers	Invoice	Fraction of sw used by JU	Hosting site only	
Debuggers	Invoice	Fraction of sw used by JU	Hosting site only	
Scientific software	Invoice	Fraction of sw used by JU	Hosting site only	

Personnel

Cost item	Verification	Method	Provider
System administration, user support and training	Payroll, and/or invoice when part of the service is subcontracted	Timesheets to show dedication to the JU	Hosting site only
Application enablement	Payroll, and/or invoice when part of the service is subcontracted	Timesheets to show dedication to the JU	Hosting site / others
Facility	Payroll, and/or invoice when part of the service is subcontracted	Timesheets to show dedication to the JU	Hosting site only
Installation	Payroll, and/or invoice when part of the service is subcontracted	Timesheets to show dedication to the JU	Hosting site only
Security	Payroll, or invoice when the service is subcontracted	Fraction according to max. dedication	Hosting site only
Cleaning	Payroll, or invoice when the service is subcontracted	Fraction according to max. dedication	

Operations and maintenance

Cost item	Verification	Method	Provider
Electricity	Invoice/Meters	Fraction used by the JU	Hosting site only
Water	Invoice/Meters	Fraction used by the JU	
Gasoil	Invoice/Meters	Fraction used by the JU	
Network connection	Invoice /Balance sheet	Fraction committed to the JU	Hosting site only
Maintenance of HPC system and the high-	N/A procured by EuroHPC	N/A	

performance disks/scratch storage		34	
Maintenance of items under "Equipment and commercial software"	Invoice	According to method in "Equipment and commercial software"	Hosting site / others

14. ANNEX 3: "AI FACTORIES" CONCEPT PAPER

Version 4.0, 25 July 2024

This concept paper addresses the EuroHPC Governing Board Members. It defines the way to implement the AI Factories[24]. It describes how the EuroHPC JU and Member States and consortia are to establish AI Factories and outlines their key features and activities. These will be reflected in the EuroHPC Call for Expression of Interest to host AI Factories.

Section 1 of this concept paper provides a description of what is an AI Factory. Thereafter a set of eligibility conditions for Member States to implement AI Factories are presented in Section 2. Section 3 provides a summary of the technical specifications that are expected to be addressed in Member States proposals on AI Factories. The Appendix I to this paper provides an overview of the different implementation modes to establish AI Factories across the EU through the EuroHPC JU.

1. <u>What are AI Factories?</u>

The Commission launched the AI Innovation Package in January 2024 to support European startups, and SMEs in the development of trustworthy AI. The AI Package proposed a limited number of targeted amendments to the EuroHPC JU Regulation for implementing the AI Factories around the EuroHPC supercomputers, which were largely endorsed by the Competitiveness Council on May 23, 2024.

The amended EuroHPC Regulation, so called the "AI Factories Act", expanded its objectives to include the development and operation of 'AI Factories'. AI Factories are entities which provide an AI supercomputing service infrastructure and will build open AI ecosystems formed around EuroHPC supercomputing facilities (hosting entities[25]). The activities covered by AI Factories will be open to public and private users, and with privileged access conditions for startups and small and medium-sized enterprises (SMEs). The amended regulation brings together the necessary resources around these supercomputers – namely computing power, data, and talent, to offer a wide and exhaustive range of services to public and private users, AI startups and SMEs, AI companies and researchers needed for the development of European general purpose AI models and other emerging AI applications or data driven applications, as well as subsequent targeted inferencing activities.

AI Factories in each Member State or a hosting consortium of Participating States will be connected to those in other Member States and to other relevant AI initiatives, such as Testing and Experimentation

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[24] According to the AI Factories Act (Council Regulation (EU) 2024/1732 of 17 June 2024 amending Regulation (EU) 2021/1173 as regards a EUROHPC initiative for start-ups in order to boost European leadership in trustworthy artificial intelligence), an AI Factory is a centralised or distributed entity providing an Artificial Intelligence supercomputing service infrastructure which is composed of: 1) an Artificial Intelligence-optimised supercomputer or Artificial Intelligence partition of supercomputer, 2) an associated data centre, dedicated access and artificial intelligence-oriented supercomputing services and attracting and pooling talent to provide the competences required in using the supercomputers for Artificial Intelligence. AI Factories should include the following features:

   i. Acquiring, upgrading, and operating AI-optimised supercomputers to enable fast machine learning and training of large General Purpose AI (GPAI) models;
  ii. Facilitating access to the AI dedicated supercomputers, contributing to the widening of the use of AI to a large number of public and private users, including startups and SMEs;
 iii. Offering a one-stop shop for startups and innovators, supporting the AI startup and research ecosystem in algorithmic development, testing evaluation and validation of large-scale AI models, providing supercomputer-friendly programming facilities and other AI enabling services;
 iv. Enabling the development of a variety of emerging AI applications based on GPAI models;
  v. Attracting, pooling, and training talent to develop their competences and skills in using the EuroHPC supercomputers for AI.

[25] 'hosting entity' refers to 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.

Facilities, Digital Innovation Hubs, EDICs, etc., thus creating a closely interconnected AI ecosystem across the whole Europe.

The different elements of an AI Factory should not be seen in isolation but rather aligned and mutually reinforce each other. **The AI Factories** should cover **two main components namely i) the AI optimised Supercomputer and ii) the associated "AI Factories" activities and services**.

It is expected that a number of AI Factories will be established in a few Member States or consortia of Participating States around existing, upgraded or new AI optimised supercomputers. These AI Factories will serve the European and national AI communities.

The **AI Factories will be serving public and private users from all the EuroHPC Participating States**, including those which are not eligible or do not wish to host an AI Factory. Such users may be granted access to the share of EU's access time and necessary services provided by any of the EuroHPC AI Factories.

In order to serve users from Participating States, which do not host an AI Factory, the EuroHPC JU will act as first entry point. The JU will then dispatch the request to the appropriate AI Factory/Factories based on a number of selection criteria. These criteria as well as the access policy concerning the EU access time will be defined and agreed in due time by the EuroHPC Governing Board.

AI startups, which are supported through the EIC Acceleration Challenge of Horizon Europe, will be given a priority access to the AI optimised supercomputers and services offered by an AI Factory.

The EuroHPC Participating States, which do not host an AI Factory, can collaborate with one or more AI Factories through a strategic agreement with a hosting entity, similar to many of the current EuroHPC systems.

The provision of services by the AI Factories should be without prejudice to the EU **state aid rules**. The European Commission will provide guidelines in due time on this matter. In principle, provision of (free) services to startups and SMEs should be covered by the General Block Exemption Regulation[26]. On the other hand, provision of services to big industry should be fee-based.

1) <u>AI Factories - Key Features to consider from a national perspective</u>

The following section outlines a set of key policy features and technical activities that a Member State or a consortium of Participating States should undertake to support the development of an AI Factory that is to be co-funded by the EuroHPC JU. These are further summarised in Appendix II and will be further expanded in the relevant Calls for Expression of Interest.

Investing in AI optimised supercomputers

AI Factories should be developed around AI optimised supercomputers to address and serve the needs of national users, their AI ecosystem and potential AI European and national AI stakeholders and serve the needs of their targeted AI ecosystem. There are three possibilities that a Member State or a Consortium of Participating States and the corresponding hosting entity can consider here – these are presented in detail in the Appendix I.

Creating a national AI Ecosystem

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[26] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0651.

Hosting entities should define and justify their needs and design choices in the context of their targeted AI usages and national/local ecosystems. Hosting entities should therefore present a comprehensive assessment of the users and AI Ecosystems they would like to serve and enhance through the AI Factory, ensuring a minimum critical mass justifying the need for an AI Factory. The assessment should include at least the following aspects:

i. **National AI Strategy**

To what extent the establishment and deployment of an AI Factory is linked and contributes to the implementation of the national AI strategy of the hosting country/countries of the hosting consortium.

ii. **National Data Policies and access strategies to the AI optimised supercomputers**

Applicants would need to describe the current National Data Policies in place (including possible access to data spaces that are available through their participation to EU initiatives such as EDICs) for enabling the access to large datasets, as well as the availability of knowledge corpus. In cases where such National Data Policy does not exist, applicants would need to provide a plan of how they will make available large data sets to the AI Factory ecosystem.

In both the above cases, Applicants should describe how they will implement policies facilitating the access to open / FAIR[27] data and proprietary data (including if necessary different fee schemes depending on the use of data for AI training/fine-tuning/inference).

iii. **National Access Policy to AI Community**

To ensure a cohesive HPC for AI approach and foster the national and local ecosystem, it is expected that Applicants would put in place an AI user-friendly access policy to the national share of computing time of the EuroHPC supercomputer and describe how it will contribute to the development of the national AI Ecosystem.

iv. **Stakeholders**

To build a thriving AI ecosystem, Applicants should clearly identify and be capable of attracting key stakeholders which can contribute to their success of their AI ecosystem. These should include:
   a. AI Companies/AI Developers/AI Startups and SMEs.
   b. AI Technology solution providers.
   c. Potential Data providers which can supply high-quality data for AI training and analysis.
   d. AI Users that will benefit from AI Factories generated AI-driven applications and solutions.
   e. AI communities, including academia and students.
   f. Private investors / incubators.

v. **AI Ecosystem needs and challenges**

Applicants should identify the needs and challenges of the AI ecosystem they intend to serve. Each AI Factory should preferably focus on selected applications/domains that are aligned with the strategic vision and strategic specialisation areas of the hosting country and/or the consortium of Participating States. They should identify the key barriers and obstacles that may hinder the creation of a thriving AI ecosystem, and the extent to which the deployment of the

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[27] Findable, accessible, interoperable, and reusable

AI Factory can overcome these obstacles to create an AI ecosystem that harnesses the full potential of AI for the benefit of the relevant stakeholders.

Applicants may include internal or external cloud solutions to bridge the needs towards an end-to-end computing continuum spanning model development, training, fine-tuning, and inference.

vi. Strategy for AI startups/SMEs

To foster a thriving AI ecosystem, a proactive startups / SMEs policy at a national/regional level plays a vital role in fostering and attracting investment in the AI sector. By facilitating access to capital to startups/SMEs and/or implementing targeted tax incentives, governments can encourage investment and support startups/SMEs to ensure the success and growth of businesses. Hosting entities are encouraged to link the AI Factory ecosystem with relevant national/regional investment measures targeted at startups and SMEs.

vii. AI Factories – KPIs

Applicants should propose key performance indicators (KPIs) and metrics to measure the contributions to the success of their AI Factory and associated AI ecosystem, such as (but not limited to):

- Number of private AI users served annually, notably start-ups and SMEs;
- Number of public AI users served annually.
- Number of participants in the AI Factory ecosystem, including European ones, served.
- Number and quality of services provided by the AI Factory
- Number of AI training sessions provided.
- Number/quality/size of GenAI open models released.
- Number/volume of available quality databases annually.
- Number of AI science applications served/released.
- Number of industrial/SME/startup applications served/released.
- Number of AI dedicated researchers in the AI Factory.
- Number of students participating in AI Factory activities.
- Usage of the AI optimised supercomputer.
- Degree of oversubscription to the AI access calls.

Applicants may propose other relevant KPIs.

2) Overview of the Technical Specifications / Activities of AI Factories

This section provides a succinct overview of the main technical aspects that are expected to be included in the forthcoming AI Factory Calls for Expression of Interest.

a. Compute

AI Factories should deliver a minimum computing capacity to address the needs of users and their AI ecosystem, including potential AI European model developers and serve the needs of their targeted AI ecosystem.

Their targeted compute requirement should be ideally justified through the use AI/HPC benchmarks. These may include, e.g. (indicative):

- **HPL-MxP benchmark:** The high-performance Linpack mixed precision benchmark seeks to address the convergence of HPC and AI workloads.

- **MLPerf Training HPC benchmark:** Benchmark, targeted at supercomputers, measuring the performance of training machine learning models for scientific applications and data. Minimum time-to-solution (e.g., training a 10 billion parameter language model in 45 days).

  Applicants may propose further benchmarks, including inference related benchmarks where appropriate.

b. Storage

AI Factories must ensure enough storage capacity to handle large and numerous databases, as well as providing the necessary flexibility to increase their capacity according to the evolution of needs of users. **The storage should be collocated with the supercomputer or connected through a high speed (terabit) connection to maximize data throughput and minimise latency.**

- **High-capacity storage:** Adequate storage capacity to manage vast datasets.

- **High-speed storage**: Availability of fast storage to ensure rapid data access and transfer.
Applicants are expected to propose I/O[28] benchmarks to test the performance of proposed storage systems.

To strike a balance between capacity and speed, a tiering storage approach that combines different technologies, from fast disks to tapes, may be considered.

c. Data

The availability and accessibility to large data repositories with high quality curated data is fundamental for the AI community to flourish. AI Factories must guarantee high-speed connectivity and unrestrained access to European Data Spaces and relevant data repositories.

- **Data facility:** Co-located or very high-speed connection to (at least) one associated data facility linked to the supercomputer. Data centres to host large volumes of data necessary for AI Factories and associated data facilities must be operational within 12 months of being selected to host an AI Factory.

- **Access to Common European Data Spaces[29]:** Hosting entities should clearly identify interaction with and access to which Common European Data Spaces they wish to interact and have access to, provided that these correspond to their targeted / selected applications / domains that are aligned with the strategic vision and strategic specialisation areas of the hosting country / hosting Consortium. Hosting Entities should also describe the principles of an eventual access to and use of agreement with such Common European Data Spaces. Complementary and relevant data repositories (e.g., Hugging Face) should also be considered, as well as readiness to integrate into the future EuroHPC Federation Platform, which will be federating EuroHPC JU supercomputers and European HPC resources.

- **Security:** AI Factories should guarantee the confidentiality and integrity of sensitive data and ensure the integrity of computational processes. Users of computing capacity could for example be authenticated using the EU eID Wallet, once available.

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[28] Input/output operations.

[29] Common European Data Spaces | Shaping Europe's digital future (europa.eu)

- **Secure and Trusted environments**: Where justified, AI factories should establish secure and trusted (research) environments for both industry and scientific research ensuring the confidentiality and integrity of data.

d. Connectivity

AI factories should ensure a high-bandwidth, low-latency secure networking to support rapid data transfer between nodes and storage systems. In addition, AI Factories should ensure secure connection to the forthcoming EuroHPC Hyper-connectivity network. Indicative references are described below:
- **High-bandwidth, low-latency internal networking**

- **Hyper-connectivity** (e.g. minimum of 100 Gbps, expandable to 1 Tbps).

e. Software and application development

AI Factories should provide a rich software environment including a ready-to-use set of AI-oriented tools (e.g., Pytorch, TensorFlow, etc.) with clear use-cases and examples for efficient use at large-scale, enabling new users to adapt quickly to the environment, as well as to facilitate the use of containerized workloads and workflows. It should be noted that most software tools at the core of AI development and execution are open source and should be supported; otherwise, AI Factories should establish adequate licensing mechanisms.

f. User Support for national users and users from the EuroHPC Participating States

Each hosting entity should present their foreseen HPC/AI professional support plan, describing the range of support activities to be offered and provided to users. This may include providing guidance for using the HPC environment, adapting the computational tasks associated to the training and fine-tuning of the models and related inference activities to the HPC environment. User support should be primarily targeting MLOps (machine learning operations). For example, users support activities should include assessing the HPC needs of the users' tasks, providing guidance on missing elements for implementation in HPC environments, parallelization techniques for optimising the memory and computing usage of the hosting supercomputer to speed up (pre-) training, fine-tuning the models for specific datasets and tasks (training or inference), or optimising the final model for efficient deployment and use. The number of required FTEs should be well justified, and the user support team should provide a well-functioning service (below 4h response time where possible).

Applicants should also describe the way they plan to serve public and private users from the EuroHPC Participating States. Such users shall be granted the share of EU's access time to the AI optimised supercomputers and AI Factory services. For such users, hosting entities should propose an appropriate access policy that respects a number of conditions for access (such as for example those in relation to the handling of sensitive information, security, confidentiality, unethical use, etc.).

AI services, including User Support, should be provided in a consistent and professional manner following industrial standards.

g. Co-working and entrepreneurial AI Factory Hubs

Applicants would need to provide a plan for making available physical facilities located nearby or associated to the foreseen AI Factory, such as sufficient large and well-adapted co-working spaces, possibly complemented by virtual working spaces. These will serve startups and SMEs, scientific communities/ talented students and HPC/AI support teams, as well as incubators and accelerators

to meet and work on common ideas and projects and get access to capital and to community support that are critical to developing the AI ecosystem.

Hosting entities should also include and/or identify the availability of a physical campus facility located nearby or associated to an AI Factory for hosting talented AI students working or trained in the AI Factory. Such facility would stimulate the relationship between the AI Factory and the local universities to create an environment that can attract the necessary talented human capital and build vibrant, attractive, and dynamic communities of practice along the AI Factory region.

h. Skills/Education

Hosting entities should present a comprehensive AI Factory Skills Plan outlining the skills required for the AI stakeholders they intend to target/serve and how to achieve them. This plan should include the offer of a structured training program highlighting relevant courses, activities, and learning pathways tailored to meet the diverse needs of potential users. Similarly hosting entities should convincingly demonstrate that they have direct access to the necessary human capital and talent and, provide a strategy as to how they intend to collaborate and engage with universities, research centers and other training providers to train and equip students at all levels with the necessary in-demand AI skills. The availability of adequate training facilities (such as for example small GPU sandboxes) at universities or research centers could help them attract and train talent.

Hosting entities should demonstrate capacity to put in place training on advanced subjects such as AI for HPC, Deep Learning, AI Programming environments, etc. Additionally, they should show extensive experience in using different delivery modes to provide advanced training in subject areas that require intensive hands-on experience (on-site, online, hybrid) and capacity to deliver a variety of training actions other than courses such as workshops, hackathons, summer-schools, etc. It is crucial that Hosting Entities also demonstrate the capacity to collaborate with other institutions to deliver training. It will be the responsibility of each AI Factory to design and present a robust and comprehensive set of training/education actions to be implemented.

i. Engagement/ Interacting with the AI community

AI Factories should professionally engage with and serve the broader AI community – from academia and research institutions, to startups, SMEs, and industry – liaising with existing initiatives like TEFs, EDICs, EDIHs and National HPC Competence Centres. AI Factories need to identify the main stakeholders at regional and national level and establish connections through networking events and conferences, sharing knowledge and working together on joint projects. Strategic formal partnerships, talent exchange, and joint initiatives can further strengthen these collaborations. It should be noted that national and local ecosystems should be the starting point for building AI Factories. The organisation and coordination of AI, data and HPC initiatives at the European level is important and ensuring to avoid national silos.

Hosting entities may consider the use and support of external professional service companies to optimise their offering and engagement with the AI ecosystem.

j. AI Factories networking

AI Factories should establish a collaborative framework to ensure effective networking and resource optimisation among themselves (e.g., knowledge sharing, specialisation, assets reutilisation, support, training, staff exchange, etc.). The collaboration between AI factories is very important to enable a thriving European AI ecosystem. This activity will be developed more extensively at a later stage when several AI Factories are operational.

A particular collaboration use case are HPC/AI projects spanning across two or more AI Factories, where users should have a homogeneous end-to-end experience. The collaboration framework must

envisage different formal and informal collaboration mechanisms, including the allocation of resources for this purpose, in order to benefit from synergies and avoid duplication of efforts across the ensemble of AI Factories.

k. Developing trustworthy AI

The AI Factories will cooperate with the AI Office and the TEFs to develop robust guidelines and standards for AI development within AI Factories, aligned with the principles and requirements of the AI Act. These guidelines should cover among other, areas such as data protection, transparency, and accountability. This will help create a unified approach to AI development across Europe and different entities and promote trustworthiness and compliance.

The AI Factories will furthermore work closely with the Testing and Experimentation facilities (TEFs), and the national AI supervision agencies, to test and validate AI solutions developed in the AI Factories to ensure they are considered trustworthy and compliant with the AI Act and robust enough to be used in real world settings.

APPENDIX I
AI OPTIMISED SUPERCOMPUTERS FOR AI FACTORIES

It becomes clear that AI Factories need **to deploy timely so that an AI dedicated supercomputing and service infrastructures for Europe's AI start-up and research ecosystem can be operational**.

Three complementary tracks can be considered:

1. "AI Factories" Track

This track is foreseen for those Hosting Entities that are already hosting a EuroHPC Supercomputer which can demonstrate enough computing resources for training large scale, general-purpose artificial intelligence models and emerging artificial intelligence applications can be appointed as AI Factory.

This track will be implemented through a permanently Open EuroHPC JU Call for Expression of Interest of Hosting Entities to appoint existing EuroHPC Supercomputing systems as an AI Factory. The hosting entity commits to undertake AI Factories activities (i.e., the full range of AI factory services).

Further to the appointment of an existing EuroHPC Supercomputing system as an AI Factory, an implementation grant may be awarded to cover for the AI Factories activities (i.e., services). An amendment to the existing Hosting Agreement should be introduced.

2. Upgraded AI Optimised Supercomputer Track

This track is foreseen for those Hosting Entities that are willing to upgrade their current EuroHPC supercomputer towards an AI Factory.

This track will be implemented through permanently Open EuroHPC JU Call for Expression of Interest of Hosting Entities to deploy and operate an AI Factory (Upgrade supercomputer to AI + AI Factory (Services, Skill development, User support)).

Further to the selection of Hosting entities, a Call for Tender (e.g., procurement) for the acquisition of the upgrade will be launched in addition to one accompanying grant to cover for the AI Factories activities (e.g. services). The existing grant for operational costs will be adapted in consequence. An amendment to the existing Hosting Agreement should be introduced.

3. New AI Optimised Supercomputer Track

This track is foreseen for those Hosting Entities that are willing to acquire a new AI Factory optimised Supercomputer.

Permanently Open EuroHPC JU Call for Expression of Interest of Hosting Entities to deploy and operate an AI Factory (AI new system + AI Factory (Services, Skill development, User support).

Further to the selection of Hosting entities, a Call for Tender (e.g., procurement) for the acquisition of the new supercomputer will be launched in addition to 2 accompanying grants to cover for the operational costs of the supercomputer and another one to cover for the AI Factories activities (e.g. services).

It should be noted that these 3 AI Factories Implementation tracks can be implemented in parallel.

APPENDIX 2

AI Ecosystem Key Features

Key Feature	Key Feature Description	How address it
AI optimised supercomputers	• Is the application developed around an AI optimised supercomputer (existing, upgraded, or new)?	Provision by the Applicants of the description of an AI-optimised supercomputer.
National AI Strategy	• To what extent the establishment and deployment of an AI Factory is linked and contributes to the implementation of the national AI strategy of the hosting country/countries of the hosting consortium?	Provision by the Applicants of the description of the National AI Strategy or equivalent, clearly showing the strategic character of the AI Factory proposal. **NB:** In the absence of a formal national AI strategy, applicants will need to describe the strategic national (or Consortium) character of their AI Factory approach.
National Data Policies	• Is there a current National Data Policy enabling the access to large datasets, availability of knowledge corpus, etc., and if not, is there a plan included describing how the proposal will make available large data sets to the AI Factory ecosystem? • Does the proposal include a plan on how to implement policies facilitating the access to open data and proprietary data (including if necessary different fee schemes depending on the use of data for training/fine-tuning/inference)?	Provision by the Applicants of the description of: 1. National Data policy or equivalent. 2. Meaningful implementation policy for access to large data sets **NB:** the access to available "data" is key to facilitate the functioning of any AI Factory.
Access Policy	• Does the proposal include an AI user-friendly national access policy?	Provision by the Applicants of a description of the access policy to the nationally owned computing time of the EuroHPC supercomputer. NB: This is an essential requirement for a part of the application on an AI Factory proposal to provide

Stakeholder participation	• Does the application include a plan on how to attract key national AI stakeholders?	Provision by the Applicants of a description of a convincing plan for attracting such key AI stakeholders. **NB:** This is an essential requirement for an AI Factory.
AI Ecosystem needs and challenges	• Does the proposal describe its strategic focus industrial / application sectors and how it would help develop further the AI ecosystem in these sectors? • Does the proposal include any plans for provision of cloud solutions?	Provision by the Applicants of the description of the key industrial/application sectors as well as of the key obstacles to overcome to further develop the AI innovation ecosystem in these sectors. Provision by the Applicants of any internal or external cloud solutions to bridge the needs towards an end-to-end computing continuum. **NB:** The identification of the above is essential for justifying the need of building an AI Factory that corresponds to the strategic national priorities.
Strategy for startups and SMEs	• Does the proposal include plans for linking to an existing or developing a new national/regional strategy for helping investment in the AI startups and SMEs?	Provision by the Applicants of the description of any plans they have on linking to an existing or developing a new investment strategy for AI start-ups and SMEs. **NB:** While not an essential requirement for an AI Factory, it would help a lot to further grow the national AI innovation ecosystem.
KPIs	• Does the proposal include key performance indicators (KPIs) and targets to measure the contributions to the success of the AI Factory and associated AI ecosystem?	Inclusion by the Applicants of a set of meaningful KPI indicators and realistic targets. **NB:** These are critical to monitor progress and identify where/when needed corrective action.