EuroHPC JOINT UNDERTAKING

DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 19/2025

Amending the Joint Undertaking's Work Programme and Budget for the year 2025 (Amendment No 3)

THE GOVERNING BOARD OF THE EUROHPC JOINT UNDERTAKING,

Having regard to Council Regulation (EU) 2021/1173 of 13 July 2021 on establishing the European High Performance Computing Joint Undertaking and repealing Regulation (EU) 2018/1488[1], (hereinafter, "the Regulation"),

Having regard to the Statutes of the European High Performance Computing Joint Undertaking annexed to the Regulation (thereinafter "Statutes") and in particular to Articles 1(o), 7(7)(b), 9(4)(b) and (c) and 18 of thereof,

Having regard to the 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[2],

Having regard to Decision of the Governing Board of the EuroHPC Joint Undertaking No 3/2020, approving the Financial Rules of the EuroHPC Joint Undertaking[3],

Having regard to Decision of the Governing Board of the EuroHPC Joint Undertaking No 66/2024 of 28 November 2024 adopting the Joint Undertaking's Work Programme and Budget for the year 2025

Having regard to Decision of the Governing Board of the EuroHPC Joint Undertaking No 09/2025 of 7 April 2025 adopting the amended Joint Undertaking's Work Programme and Budget for the year 2025 (Amendment No 2),

WHEREAS

[1] OJ L 256, 19.7.2021, p. 3–51

[2] OJ L, 19.6.2024, p. 1-5.

[3] Readopted by Decision of the Governing Board of the EuroHPC Joint Undertaking 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.

(1) The Joint Undertaking's Work Programme and Budget for the year 2025 has been adopted by the means of the Decision of the Governing Board No 66/2024 of 28 November 2024, and amended by the means of Decision No 01/2025 of 5 February 2025 (Amendment No 1), and Decision No 09/2025 of 7 April 2025 (Amendment No 2),

(2) The annual Work Programme needs to be amended for the third time in 2025 to reflect the following changes:

- **A call on HPC Centres of Excellence and HPC Lighthouse Codes. The EU contribution (Horizon Europe) for this call has been set at EUR 60 Million as follows:**
  - **. An initial EUR 20 Million was allocated in Work Programme 2024 for a Call for HPC Centres of Excellence (EUR 10 Million) and for an HPC Application Call (EUR 10 Million).**
  - **An additional EUR 20 Million will be allocated from the 2026 Horizon Europe budget**
  - **This will be complemented by new 2025 Horizon Europe commitment credits (EUR 20 Million), in order to reach the total maximum EU funds of EUR 60 Million.**
- **The overall budget allocation of this Work Programme remains unchanged compared to the amendment 1 of the 2025 budget, therefore the present amendment decision refers only to work programme actions, and not to the budget of the Joint Undertaking.**

(3) The Statutes of the EuroHPC JU confer on the Governing Board the powers to adopt the annual work programme and its annual budget including the staff establishment plan,

(4) The Executive Director of the EuroHPC Joint Undertaking submitted the amended Work Programme to the Governing Board,

(5) In the interest of legal certainty and clarity, an amended Work Programme and Budget of the EuroHPC Joint Undertaking for the year 2025 shall be adopted by the Governing Board,

HAS ADOPTED THIS DECISION:

Article 1

The amended Annual Work Programme and Budget of the EuroHPC Joint Undertaking for the year 2025 annexed to this decision is adopted.

Article 2

The Executive Director shall make the amended Annual Work Programme and Budget 2025 publicly available on the website of the EuroHPC Joint Undertaking.

Article 3

This Decision shall enter into force on the date of its adoption.

Done at Luxembourg, on 7 May 2025

For the Governing Board
Rafal Duczmal
The Chair

Annex: WP25 Amendment No 3

WORK PROGRAMME and BUDGET

EuroHPC JOINT UNDERTAKING (JU)

2025

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DRAFT ANNUAL WORK PROGRAMME YEAR 2025

INTRODUCTION

The EuroHPC Joint Undertaking (hereinafter "EuroHPC JU" or "JU"), will contribute to the ambition of value creation in the Union with the overall mission to develop, deploy, extend and maintain in the Union an integrated world class supercomputing and quantum computing infrastructure and to develop and support a highly competitive and innovative High Performance Computing (HPC) ecosystem, extreme scale, energy-efficient, environmentally sustainable and highly resilient HPC and data technologies.

In July 2021, Council Regulation (EU) 2021/1173 (EuroHPC JU Regulation) was adopted, repealing Council Regulation (EU) 2018/1488, and provides the basis of the Work Programmes of the Joint Undertaking.

The Annual Work Programme 2025 contains the actions to be implemented in 2025. Calls to be launched in 2025 will be prepared by the JU and presented for adoption by the Governing Board by separate Governing Board Decisions.

General Conditions and restrictions:

For all activities implemented by the EuroHPC JU that are funded from the Horizon Europe (HE) budget, the Governing Board may decide to limit in the calls for proposals the eligibility of participants according to Horizon Europe Article 22(5).

For all activities implemented by the EuroHPC JU that are funded from the Digital Europe Programme (DEP) budget, the Governing Board may decide to limit in the calls for proposals or procurements the eligibility of participants according to Digital Europe Articles 12(6) and 18(4).

For all activities implemented by the EuroHPC JU that are funded from the Connecting Europe Facility (CEF) budget, the Governing Board may decide to limit in the calls for proposals or procurements the eligibility of participants according to Connecting Europe Facility Article 11(4).

All actions with Union contribution below 100% are EU Synergy calls. Grants and procurements can be linked with another grant funded from any other EU funding programme including the Recovery and Resilience Fund, provided that there is no double funding and that such support does not cover the same cost. The grants under both calls will be managed as linked actions.

The Governing Board may decide to allocate a 'STEP Seal' to projects that are funded from Horizon Europe or the Digital Europe Programme . The STEP seal[4] is an EU quality label awarded to high-quality digital technologies and deep tech innovation projects contributing to the STEP objectives.

Restrictions for the protection of European digital infrastructures, communication and information systems, and related supply chains*:*

The protection of European communication networks has been identified as an important security interest of the Union and its Member States[5]. In line with the Commission Recommendation on the cybersecurity of 5G networks of 2019[6] and the subsequent report on EU coordinated risk assessment of the cybersecurity of 5G networks of 2019[7], the EU Toolbox on 5G cybersecurity[8], the second report on Member States' progress in implementing the EU toolbox on 5G cybersecurity of 2023[9], and the related Communication on the

[4] For conditions see the STEP Regulation

[5] European Council conclusions of 1 and 2 October 2020 (EUCO 13/20), point 11; Council Conclusions on the significance of 5G to the European Economy and the need to mitigate security risks linked to 5G, 14517/19.

[6] Commission Recommendation (EU) 2019/534 of 26 March 2019 Cybersecurity of 5G networks, L 88/42.

[7] NIS Cooperation Group, Report on EU coordinated risk assessment of the cybersecurity of 5G networks, 9 October 2019.

[8] NIS Cooperation Group, EU Toolbox on 5G Cybersecurity, 29 January 2020.

[9] NIS Cooperation Group, Second report on Member States' progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023.

implementation of the 5G cybersecurity toolbox of 2023[10], the Commission together with the Member States has worked to jointly identify and assess cyberthreats and security risks for 5G networks[11]. The toolbox also recommends adding country-specific information (e.g. threat assessment from national security services, etc.). This work is an essential component of the Security Union Strategy and supports the protection of electronic communications networks and other critical infrastructures.

Entities assessed as "high-risk suppliers", are currently set out in the second report on Member States' progress in implementing the EU toolbox on 5G cybersecurity of 2023[12] and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023[13].

In accordance with art 136 (2) of the Financial Regulation (2024/2509), this Work Programme has identified actions that fall under the AI Factories pillar, the Infrastructure pillar or the Connected and Federated pillar that concern strategic assets and interests, for which it sets out specific award procedures aimed at ensuring the protection of the integrity of digital infrastructure, communication and information systems, and related supply chains.

This entails the need to avoid the participation of high-risk supplier entities and the use of non-secure equipment and other goods, works and/or services in the deployment of key digital infrastructures, communication and information systems, and related supply chains to prevent technology transfer and the persistence of dependencies in materials, semiconductor components (including processors), computing resources, software tools and virtualisation technologies, and to preserve the integrity of the concerned systems, including from a cybersecurity perspective.

In order to protect the concerned strategic assets and interests of the Union or its Member States, it is therefore appropriate that the two following additional eligibility criteria apply to the actions listed below and identified in the Work Programme as "subject to restrictions for the protection of European digital infrastructures, communication and information systems, and related supply chains":

1. Entities that are assessed as high-risk suppliers of mobile network communication equipment (and any entities they own or control) are not eligible to participate in any capacity, including as beneficiaries, affiliated entities, associated partners, third parties giving in-kind contributions, subcontractors or recipients of financial support to third parties (if any).

   The assessment is based on the following criteria:

   - likelihood of interference from a non-associated third country, for example due to:
     - the characteristics of the entity's ownership or governance (e.g. state-owned or controlled, government/party involvement);
     - the characteristics of the entity's business and other conduct (e.g. a strong link to a third country government);
     - the characteristics of the respective third country (e.g. legislation or government practices likely to affect the implementation of the action, including an offensive cyber/intelligence policy, pressure regarding place of manufacturing or access to information).
   - (cyber-)security practices, including throughout the entire supply chain;
   - risks identified in relevant assessments of Member States and third countries as well as other EU institutions, bodies and agencies, if relevant.

[10] Communication from the Commission: Implementation of the 5g cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final.

[11] Within the NIS framework NIS 1 + 2 [Directive - 2022/2555 - EN - EUR-Lex (europa.eu)]

[12] NIS Cooperation Group, Second report on Member States' progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023.

[13] Communication from the Commission: Implementation of the 5G cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final

2. Equipment and other goods, works and/or services related to 5G/6G mobile network communication equipment, and other technologies linked to the evolution of European communication networks must:
    - not be subject to security requirements by third country that could affect the implementation of the action (e.g. technology restrictions, national security classification limiting the use of the equipment, etc.);
    - comply with (cyber-)security guidance issued by the Commission, in particular communications on the 5G toolbox;
    - apply (cyber-)security requirements throughout the life cycle, including the selection and award procedure and criteria for purchases, the use, and also the related services, including installation, upgrading or maintenance;
    - ensure (cyber-)security by adequately protecting the availability, authenticity, integrity, and confidentiality of stored or transmitted or processed data or the functions or services offered by, or accessible via, that equipment.

   Exceptions may be requested from the Governing Board and will be assessed on a case-by-case basis, taking into account the criteria provided for in the 5G cybersecurity toolbox, the security risks and availability of alternatives in the context of the action.

The Governing Board shall agree on the list of concerned actions in this Work programme that fall under the AI Factories pillar, the Infrastructure pillar or the Connected and Federated pillar and that shall be identified as "subject to restrictions for the protection of European digital infrastructures, communication and information systems, and related supply chains".

OPERATIONS

The key objective of the EuroHPC JU is to further deploy and provide access in the Union to a world leading service and data infrastructure with high-end supercomputers which are indispensable to run the most demanding and strategic applications, such as climate change, personalised medicine etc.

This action builds on the previous infrastructure activities undertaken by the EuroHPC JU since its creation in 2018. The Operational section of this Work Programme will be organised using the Pillars of activity as set out in Regulation.

Furthermore, on 9 July 2024, the 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 came into force. This work programme will now include calls related to this new AI Pillar.

Pillars of Action

The 2025 Work Programme will follow the different pillars of actions as set out in the Regulation (2021/1173), amended by Regulation (2024/1732).

Since most actions are ongoing over more than one year, this work programme will summarise ongoing actions in each Pillar (if any) and then in a separate section introduce the Calls to be launch in 2025. In 2025, the JU will also launch calls that were committed in 2024 and due to changes in priorities linked to the amendment of the EuroHPC Regulation will be launched from 2025 onwards. (please annex to this document for more details)

TABLE OF ACTIONS WITH BUDGET ALLOCATION

New Calls

Pillar	**Actions**	**Programme**	**Type of action/ Funding rate**	**EU Contribution (EUR)**	**Total Budget (EUR)**
AI Factories	Procurements: AI-optimised and upgraded EuroHPC supercomputers	DEP	EU 50% PS 50%	397 Million in 2025 (a total of 815 Million until 2027)	794 Million in 2025 (a total of 1,630 Million until 2027)
	AI Factory Grant	Horizon Europe	EU 50% PS 50%	156 Million	312 Million
	Networking of AI Factories	Horizon Europe	EU 100%	6 Million	6 Million
	AI Factories Sovereign Cloud and edge-cloud bridges	CEF	100%	29 Million in 2025 (a total of 119 Million over a three-year period starting in 2025)	29 Million in 2025 (a total of 119 Million over a three-year period starting in 2025)
	EuroHPC AI Factory Antennas	Horizon Europe	EU 50% PS 50%	35 Million	70 Million

Technology	Quantum Enhanced ML	Horizon Europe	EU 50% PS 50%	8 Million	16 Million
	Post-exascale computing	Horizon Europe (2026)	EU 50% PS 50%	20 Million *(budget to be committed in 2026)*	40 Million *(budget to be committed in 2026)*
Applications	HPC Centres of Excellence and HPC Lighthouse Codes	Horizon Europe	EU 50% PS 50%	60 Million *(budget committed from 2024, 2025, and 2026 contributions)*	120 Million *(budget committed from 2024, 2025, and 2026 contributions)*
	Workflows and Services for new Computing Environments	Horizon Europe (2026)	EU 50% PS 50%	20 Million (*budget to be committed in 2026)*	40 Million
	Code reengineering in new HPC/AI environments - HPC for AI/AI for HPC	Horizon Europe (2026)	EU 50% PS 50%	20 Million (*budget to be committed in 2026)*	40 Million
Competences and Skills	National Competence Centres	DEP (2026)	EU 50% PS 50%	35 Million *(budget to be committed in 2026)*	70 Million
	CSA NCC Coordination	DEP (2026)	EU 100%	2 Million *(budget to be committed in 2026)*	2 Million
	EuroHPC Summit 2026	DEP	100%	700,000	700,000
	User Day 2025	DEP	100%	200,000	200,000
International	CSA Collaboration with third countries	Horizon Europe	100%	1.5 Million	1.5 Million

	on AI Factories and HPC/AI (TPC)				
	CSA Collaboration HPC with third countries (e.g.: Latin America)	Horizon Europe	100%	3 Million	3 Million
	International HPC Summer School	Horizon Europe	100%	1 Million	1 Million

AI FACTORIES PILLAR

Ongoing activities:

The JU's AI Factories strategy will continue to be implemented in 2025.

The rolling calls (see GB Decision No 57/2024 of 15 October 2024 approving the amendment Work Programme 2024- 5th amendment) to select

(1) existing hosting entities of EuroHPC supercomputers for acquiring Advanced Experimental AI-optimised Supercomputing Platforms (optional), as well as for establishing an associated AI Factory (Call Ref. EUROHPC-2024-CEI-AI-01)
(2) the Hosting Entities for acquiring or upgrading EuroHPC supercomputers with AI capabilities, an Advanced Experimental AI-Optimised Supercomputing Platform (optional) and AI Factory (Call Ref. EUROHPC-2024-CEI-AI-02)

will 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. Cut off-dates will be on 1 February 2025, 2 May 2025 and subsequently every 3 months with last cut-off date being the 31st of December 2025, or until the available budget runs off.

Calls in 2025

AI Factories (Call Ref. EUROHPC-2024-CEI-AI-01)

A permanently Open EuroHPC JU Calls for Expression of Interest to select the existing EuroHPC Hosting Entities for operating an AI Factory. The hosting entity commits to undertake AI Factories activities (i.e., the full range of AI factory services).

The above-referred call text for AI Factories for the Work Programme 2024 describe the action. It is continuously open until 31st December 2025, with pre-defined cut-off dates which will trigger the evaluation of the applications submitted up to each respective cut-off date or until the depletion of available funds.

Selected Upgraded and AI Optimised Supercomputers to be procured in 2025(Call Ref. EUROHPC-2024-CEI-AI-02)

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.

Indicative Budget:

In 2025, the total indicative budget of EUR 794 Million for the acquisition and operation of the supercomputers and upgrades and the operation of the AI Factories would be made up of an EU contribution (DEP) of EUR 397 Million committed in 2025 matched by a PS contribution of EUR 397 Million.

In 2025, the Union financial contribution (Horizon Europe) of EUR 156 Million shall cover up to 50% of the costs associated with the setting up and operation of the "AI Factories".

Networking and coordination of Artificial Intelligence Factories (CSA)

The central objective of the Coordination and Support Action is to maximize the impact of Artificial Intelligence Factories (AIF) supercomputing resources and services across Europe, being responsible for the coordination, networking and exchange of best practices of the European AIFs, in particular facilitating the sharing of applications, knowledge, information, and training. In order to accomplish these objectives, the selected consortium will also establish effective cooperations with other European HPC and AI initiatives, such as Testing and Experimentation Facilities (TEFs), European Digital Innovation Hubs (EDIHs), CoEs, NCCs, or the Alliance for Language Technologies (ALT-EDIC), etc.

Scope:

Proposals should aim at coordinating and promoting networking of the AIFs. In particular, it is expected to establish a communication platform, facilitate dialogue, promote the objectives of the AIFs and organize outreach events and workshops on topics of interest to the AIFs and their communities. The activities should leverage on synergies and complementarity of the AIFs. It is expected to identify potential training solutions and tools available from the AIFs network to support and assist AIFs in addressing requests and/or needs of their constituencies and help networking of respective national and European activities, for example, through the provision of mentoring and twinning schemes. The selected consortium is also expected to provide advisory services for users in locations where AIFs do not have presence, by offering information, assessing their needs, and transferring their demands to the most suitable AIF.

The Coordination and Support Action should:

- Coordinate the activities and exchange of best practices across the AIFs.
- Assist the development of the AIFs and coordinate their collaboration.
- Increase the overall impact and quality of AIF services.
- Establish a collaborative framework to ensure effective networking and resource optimisation among AIFs, including, but not limited to, knowledge sharing, specialisation, assets reutilisation, support, training, and staff exchange.

- Advise newcomers (users and/or projects) and channel their needs and demands to the adequate AIFs, optimising the efficiency and impact of the network.
- Attract new users and support the engagement of startups, industry and SMEs in AIFs activities.
- Improve SMEs', startups', and industry's awareness on AIFs capabilities and services.
- Organise the sharing of existing HPC/AI codes and libraries and facilitate access to upgraded HPC/AI application codes
- Advise and support AIFs with the development of sustainability.
- Enhance mobility of HPC/AI specialists between communities, academia, public and private sectors.
- Facilitate access to services and training offered within the network of AIFs.
- Maximise visibility and outreach of AIFs, in particular to startups, SMEs, and industry.
- Implement and promote a market place in close collaboration with the AIFs for HPC/AI services specifically addressing the needs of startups and SMEs and taking into account the diversity of the European ecosystem.
- Implement and coordinate technology transfer activities at European level and for the Digital Single Market.
- Define and monitor meaningful qualitative and quantitative KPIs for AIFs to measure the impact of these initiatives on the European HPC and AI ecosystems
- Gather user feedback in views to improve the quality of service of AIFs. Systematically share the relevant feedback with the EuroHPC JU.

Expected Outcome:

Upon completion of the action, the European HPC and AI ecosystems will be strengthened through an effective network of AI Factories (AIFs) supporting the adoption and use of HPC in the development of trustworthy artificial intelligence (AI) by startups and SMEs and scientists, but also by the private and public sector in general, taking into account the specific needs of the local and national ecosystems. The coordinated network will facilitate synergies and assets reutilisation, support, training, staff exchange, knowledge transfer between, AIFs, as well as prevent duplication of efforts.

The Coordination and Support Action will ensure the network of AIFs will be embedded in and enhanced e European AI/ HPC ecosystem with strong links to other European initiatives, for example, the Digital Innovation Hubs, AI on Demand Platform, networks of European HPC Centres of Excellence (CoEs) and National Competence Centres (NCCs).

Moreover, the action will result in:

- Contribution to the realisation of the EuroHPC overall and specific objectives.
- Effective coordination and exchange of best practices and information among the network of AIFs.
- Curated access to services and facilities offered by AIFs.
- Maximised visibility and outreach of AIFs, in particular to AI startups, SMEs and industry.
- Improved coordination and increased availability of training activities on across AIFs and within the European HPC ecosystem.

Indicative Budget

The JU considers that proposals requesting a contribution from the EU of up to EUR 6 Million and a duration of 3 years would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting another duration or other amounts. Only one proposal will be selected.

Enhancing AI Factories with sovereign cloud/edge computing infrastructures

AI is transforming industries and creating new economic opportunities for the EU. To leverage this technology shift, European Start Ups and SMEs need robust and reliable industrial cloud systems capable of supporting the computing power provided by AI Factories.

Pre-training of Large AI models is highly compute intensive. Once the model is trained, the need for heavy computational resources decreases and a complementary cloud infrastructure becomes crucial for further model development (AI inference), finetuning and deployment, application development and for scaling up. A European cloud and edge infrastructure around AI Factories would need to cater for the needs of finetuning and running Gen AI models by using relatively small clusters of GPUs, offering in addition capacity storage facilities with substantial throughput for managing large datasets and (ii) high-capacity networks between compute nodes. The complementary cloud/edge service infrastructure needed for AI Factories should be provided by private actors.

Expected Outcome:

- Strengthening the European cloud industry by creating a sovereign cloud dedicated to artificial intelligence, high-performance computing and quantum computing.
- Enhancing the current and future capacities of the EU HPC/AI ecosystem, and in particular of AI factories, by providing a secure, unified and scalable system to facilitate the development of (AI) GenAI HPC-based solutions.
- Delivery of a high-quality range of digital resources and services for industrial and academic addressing the development of massive GenAI models and AI for science in Europe
- Ensuring that the EU's vision, and ethical standards are well reflected in the GenAI HPC-based solutions developed.
- Contribution to the development of a competitive European converged HPC/AI/Cloud ecosystem
- Aligning the EU and national initiatives and bridging the gaps between EU and international efforts in these domains, and interaction and collaboration with other similar international efforts

Indicative Budget:

- An EU contribution from the Connecting Europe Facility 2 Programme of EUR 119 Million (100% EU funded) will be committed over a three year period starting in 2025. In 2025, EUR 29 Million Euros will be available for this activity. In 2026, EUR 30 Million will be available for this activity and in 2027, EUR 60 Million will be available for this activity.

Type of Action: Procurement

Call - EuroHPC AI Factory Antennas

HORIZON-EUROHPC-JU-2025-AIFA-01

Overview of this call[14]

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)[15]	Indicative number of projects expected to be funded
		2025		
Opening (indicative): 09 April 2025[16] Deadline (indicative): 09 July 2025				
HORIZON-EUROHPC-JU-2025-AIFA-01: EUROHPC AI FACTORY ANTENNAS	HORIZON-JU-RIA	70	5	7-8
Overall indicative budget		70		

General conditions relating to this call

The aim of AI Factories is to provide European startups as well as the industrial and the scientific community with enhanced access to AI optimised computing capabilities and underpinning services for the training and development of general-purpose, large-scale AI models, and for the development, testing and validation of emerging AI applications.

Call EUROHPC-2024-CEI-AI-01 and Call EUROHPC-2024-CEI-AI-02 were launched on 14 September 2024. The present Call for proposals aims to select 'AI Factory Antennas' that will be linked with an established AI factory and its AI optimised supercomputer. This call is launched in accordance with the

14 AI Factory Antennas

15 Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

16 The call will be open after the third AI Factory call cut-off (TBC) and close in XXX 2025 allowing for all Participating States who wish to be part of an AI Antenna to apply.

EuroHPC Regulation[17], taking into account the EU Financial Regulation[18] and where relevant on the basis of Financial Rules of the EuroHPC JU[19].

The aim of an AI Factory Antenna is to provide national AI ecosystems of a Participating State of the EuroHPC JU with relevant support services, algorithmic support, training activities and access to talent. The AI Factory Antenna will also have to ensure access to supercomputing resources from an established AI Factory.

This call for proposals will allow for more EuroHPC Participating States to have their own 'AI Factory Antenna' without having to invest in supercomputing resources required for the establishment of a fully-fledged AI Factory.

To be eligible under this call, proposals by EuroHPC Participating States for establishing an AI Factory Antenna must fulfil the following two conditions:

- **The Participating State has not yet been selected to host an AI Factory or be already partner of a selected AI Factory;**
- **The proposal must include a (pre- agreed) association with an established AI Factory.**

All selected AI Factory Antennas under this call will thus be in a position to provide AI-optimised computing capabilities and services for the large-scale training and development of general-purpose AI models, and other AI applications/ solutions to their national stakeholders and users of their countries. Where relevant, an AI Factory Antenna may under this call also acquire and provide (small scale) AI compute resources for the fine tuning, testing and validation of AI applications, complementing the AI-optimised computing resources provided by its linked AI Factory,

Proposals for establishing AI Factory Antennas are invited for the following topic(s):

HORIZON-EUROHPC-JU-2025-AIFA-01: EUROHPC AI FACTORY ANTENNAS

Specific conditions	
Expected EU contribution per AI Factory Antenna	The EuroHPC JU estimates that a maximum EU contribution of up to EUR 5 million for a duration of up to 3 years would allow these outcomes to be addressed appropriately. The duration should be aligned with the duration of the established AI Factory. .

[17] Council Regulation (EU) 2021/1173 on establishing the European High Performance Joint Undertaking, as amended by Council Regulation 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 (https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202401732&qid=1741078538770)

[18] Regulation (EU, Euratom) 2024/2509 of the European Parliament and of the Council of 23 September 2024 on the financial rules applicable to the general budget of the Union (recast), OJ L, 2024/2509, 26.9.2024 (hereinafter referred to as 'FR') (Regulation - EU, Euratom - 2024/2509 - EN - EUR-Lex)

[19] 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.

Expected relationship between AI Factory and AI Factory Antenna	The established AI Factory will be expected to link up with the AI Factory Antenna and include it in all AI Factory activities. For these activities, it will not receive additional EU funds. The selected AI Factory Antenna and the AI Factory will be expected to sign a Memorandum of Understanding setting out the terms of their collaboration
Indicative budget	**The total indicative budget for the AI Factory Antenna call is up to EUR 70 million. The maximum amount of the EU contribution (up to 50 % of the total eligible costs) that may be allocated to an AI Factory Antenna is up to EUR 5 million and is subject to EU budget availability.**
Type of Action	HORIZON JU Research and Innovation Action
Eligibility conditions	**The current Call is open to a single entity or a consortium of entities from one EuroHPC Participating State.** **Furthermore, entities established in countries with which association to Horizon Europe negotiations are being finalised and/or pending ratification, and which have committed to join the EuroHPC JU in the year when the call is launched, are eligible to participate. However, even if such entities are selected, the Grant Agreement can only be signed if the association with the Horizon Europe has started producing legal effects, and if the Governing Board of EuroHPC JU has confirmed membership of the new Participating State.** **Entities or consortia of entities that are already beneficiaries of an AI Factory grant and are fulfilling the conditions specified in Article 9 of the EuroHPC Regulation are ineligible to apply for this Call.** **Participation in more than one AI Factory Antenna is not permitted.**
Procedure	The granting authority will fund applications that meet all the evaluation criteria and subject to the ranking list approved by the EuroHPC Governing Board.
Legal and financial set-up of the Grant Agreements	Applicants to this call will need to submit the following documents : Applicants must provide a Letter(s) of Support proving the commitment of the Participating State to the AI Factory Antenna proposal and the commitment of this Participating State to cover the expenses of the proposal not covered by the EU contribution. Such commitment letter should be provided by an authorised representative of the Participating State. Applicants representing an AI Factory Antenna must provide a Letter of Intent co-signed with the consortium leader of an established AI Factory agreeing to their association, setting out how it will be linked with this established AI Factory. The AI Factory Antenna will be expected to substantiate how it can work in close cooperation and synergy with the established AI Factory extending the services it provides currently and in the future.

	This 'Letter of Intent' should also include an Annex providing a short overview of the main association conditions agreed between the respective parties and should include the financial conditions of such an association (if any). If the proposal is selected, this 'Letter of Intent' will be turned into a 'Memorandum of Understanding' (see below). In order to assess the applicants' eligibility, the following supporting documents are requested: - The legal entity identification form[20] 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; - AI Factory Antenna consortium: in addition to the supporting documents referring to their legal status, the consortium members will submit a signed declaration (modal mandate letter Annex XYZ) based on the model Consortium Agreement/Power of Attorney, appointing a consortium leader and giving a mandate to him. - Each applicant in an AI Factory Antenna consortium must fill-in and provide the duly signed Declaration of Honour
Other conditions	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 of this call will be managed as linked actions with the Calls EUROHPC-2024-CEI-AI-01 and EUROHPC-2024-CEI-AI-02

Expected Outcome:

The present Call for proposals is launched for the selection of an entity or a consortium of entities to establish an AI Factory Antenna. This call is launched in accordance with the EuroHPC Regulation, taking into account the EU Financial Regulation and where relevant on the basis of Financial Rules of the EuroHPC JU.

For the purposes of this call, an AI Factory Antenna is an entity, or a consortium of entities from a single EuroHPC Participating State.

The AI Factory Antennas will strengthen the network of EuroHPC AI Factories. The AI Factory Antennas will provide relevant support services, algorithmic support, training activities, access to talent and other support services to the national AI ecosystem(s) while also ensuring remote computing access to AI-optimised supercomputing capacity of the linked AI Factory. These services will also contribute to the mission and objectives of an 'established AI Factory' to which the AI Factory Antenna is associated.

An 'established AI Factory' is an AI Factory which has been selected via Calls EUROHPC-2024-CEI-AI-01 and EUROHPC-2024-CEI-AI-02. For the purposes of this call, an 'established AI Factory' may also be referred to as an 'AI Factory hosting entity'

[20] http://ec.europa.eu/budget/contracts_grants/info_contracts/legal_entities/legal_entities_en.cfm

The call is open to entities or consortia of entities fulfilling cumulatively the following activities as defined in Article 4 (h) (iv), (v), (vi), (vii), (viii) and conditions as defined in Article 9 (5a) of the EuroHPC Regulation:

a) The applicant entity or entities shall represent one single EuroHPC Participating State that has agreed, with a Letter of Intent, to contribute to participating in an established 'AI Factory'.

b) The applicant entity that represents the 'AI Factory Antenna' and the coordinator of the established AI Factory shall enter into an agreement which, if successful, will form the basis of Memorandum of Understand to this effect.

c) The applicant entity that represents the 'AI Factory Antenna' has to be registered as a legal entity in one of EuroHPC's Participating States.

d) The applicant entity or entities that are identified in the application as being part of the 'AI Factory Antenna' 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, this criterion (c) applies to all entities.

e) Applications should include the provision of appropriate supporting documentation proving the commitment of the Participating State and to cover the share of the total cost of the participation in the established AI Factory that is not covered by the Union contribution or by the hosting member state where the established AI factory is located as set out in Article 5 of the Regulation or any other Union contribution as set out in Article 6 of the Regulation. Such commitment documentation should be provided by an authorised representative of the Participating State. A commitment letter template will be provided for applicants (to be added later).

~~f)~~ In the case of an AI Factory Antenna 'consortium', the agreement shall take the form of a partnership between the legal entities from the Participating State, of which the consortium leader will take the lead and act as coordinator of the consortium. The coordinator will act as an intermediary for all communications between the established AI Factory, the EuroHPC JU and the AI factory Antenna. However, if selected, the partners of AI factory Antenna consortium as well as the Hosting Entity of the AI Factory are jointly responsible for implementing the action(s) resulting from the awarded grant agreement. To implement the action(s) properly, they must make appropriate internal arrangements. The AI Factory Antenna must be given power of attorney by the applicant entities to represent it to sign and administrate the grant agreement (consortium leader).

g) The AI Factory Antenna shall assume full liability towards the EuroHPC JU for the implementation of the AI Factory Antenna services as a whole, including financial and operational liability.

Scope:

Applicants should provide:

a) A description of the national AI ecosystem(s) their AI Factories Antenna aims to target

b) A description of the features their AI Factories Antenna will have in terms of activities and service offering.

c) A description of how the AI Factory Antenna will cooperate and synergise with the established AI Factory it will be linked with, extending/enhancing/complementing the services and activities it provides currently or in the future.

In detail the Applicants should structure their proposal as follows:

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

1) *Concept of the AI Factory Antenna*

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

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

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) Presentation of a convincing plan for attracting key AI stakeholders from these sectors.

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

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

   a) Description of how the AI Factory Antenna proposal is linked to the national AI Strategy / Strategies or equivalent[1] of the Applicant(s).

   b) Description of how the AI Factory Antenna 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 Antenna ecosystem.

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

4) Unless otherwise agreed with the established AI Factory, Applicants must *outline an indicative financial contribution plan,* specifying how the AI Factory Antenna will support the established AI Factory in terms of, for example, in kind or in cash contribution [for example, participation in the capital expenditure (Capex) or operational expenditure (Opex) of the AI optimised supercomputer of the established AI Factory] for access to the AI-optimised supercomputing resources and to any of the respective services of the established AI Factory. A preliminary agreement between the AI Factory Antenna and the established AI Factory may be documented in the Letter of Intent. In the Annex of this 'Letter of Intent', a short overview of the main association conditions agreed between the respective parties should be described as well as the financial conditions of this association (if any). If the proposal is selected, the 'Letter of Intent' will be formalised into a Memorandum of Understanding (MoU) upon selection.

[1] 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 Antenna approach.

5) *Overall plan for networking the AI Factory Antenna with the other EuroHPC AI Factories and Antennas.*

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

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

1) *AI Factory Antenna tools and services*

   - *Overview of the user support services*: This includes: (i) Description of the range of services that the AI Factory Antenna 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. (iii) Description of the foreseen professional user support plan, describing the range of user support activities (i.e., how the AI Factory Antenna 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 to support the established AI Factory in providing a well-functioning user support service.

   - *Computing, Software and application development environments*: description of any (small scale) AI computing resources available or to be acquired by and become available under the AI Factory antenna, as well as the software environment the AI Factory Antenna will support the AI Factory in delivering, 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*

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

   - *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).

   - *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 Antenna Hub facilities (where relevant)*

   - *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.

- *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 established AI Factory.

5) *AI Factory Antenna training facilities*

   - *Skills plan*: Description of the AI Factory Antenna 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.

   - *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 Antenna with existing European and national initiatives and with other EuroHPC AI Factories and AI Factory Antennas.

   - *Networking with other existing European and national AI & HPC initiatives:* Detailed plans for linking the AI Factory Antenna 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.

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

c. A description of the AI Factory Antenna Implementation Plan:

1) *Implementation plan and risk management*: Applicants should provide an indicative implementation plan, an organisational structure and roles for the management of the AI Factory Antenna, and a project timeline with phases for the establishment of the AI Factory Antenna. Applicants should also include a risk management approach by identifying potential risks and mitigation strategies. Applicants should also indicate a timeline for the signature of a Memorandum of Understanding with the established AI Factory to take place if selected. This Memorandum of Understanding should set out agreed activities and milestones to deliver these activities.

2) Key performance indicators (KPIs): Applicants should provide a description of a set of KPIs and metrics that the Applicant(s) will use to measure the contributions to the success of the activities of the AI Factory Antenna and associated AI ecosystem. (see European Commission Concept Paper found in the Annex 1 of this Call for Proposals for more information)

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

d. A comprehensive description of the expected Impacts of the AI Factory Antenna:

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.

Evaluation and Selection Criteria

This Call for Proposals will be evaluated by a peer review process against the evaluation criteria detailed below:

a. **Vision, plans and capability of the AI Factory Antenna 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**

   - Contribution, clarity and pertinence of an AI Factory Antenna being linked to an established AI Factory, 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.

   - Contribution, clarity and pertinence of an AI Factory Antenna being linked to an established AI Factory data facility, access to data, confidentiality and integrity of data.

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

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

   - Clarity and pertinence of the plans to invest in physical and virtual infrastructure, including in (small scale) AI computing resources, required for the AI Factory Antenna.

   - Soundness of the AI Factory Antenna's budget.

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

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

b. Quality and pertinence of experience and know-how available from the applicant entity that would provide Artificial Intelligence-oriented supercomputing service environment

   - Quality and pertinence of experience and know-how available from the applicant entity that will support the established Artificial Intelligence-oriented supercomputing service environment.

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

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

c. Plans for interaction and cooperation of the AI Factory Antenna with the established AI Factory, other established AI Factories, and other AI Factory Antennas 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.

- Quality and pertinence of the proposed AI Factory Antenna.
- Clarity and pertinence of the networking activities of the AI Factory Antenna with established European and national initiatives and with other EuroHPC AI Factories.
- Soundness of the plans of the AI Factory Antenna for developing Trustworthy AI.
- Clarity on how the activities of the AI Factory Antenna are complimentary with the established AI Factory and not overlapping with established or future National Competence Centres (NCCs). As a reminder, the NCCs should establish and maintain a network of national HPC users, promote HPC use and uptake in the private and public sector and reach out to new potential users. This includes awareness raising and outreach activities to communicate the benefits of HPC to potential users with a specific focus on SMEs. The NCCs should foster the development of the necessary expertise, especially for HPC applications, of the local communities and relevant national stakeholders in collaboration with other NCCs and European initiatives. Furthermore, the role of NCCs is limited to providing HPC expertise, training, advisory and consultancy services rather than engaging directly in operational activities of clients and stakeholders.

d. Existing capabilities and future plans of the AI Factory Antenna to contribute to the development of the talent pool

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

Applicants should also refer for guidance to the European Commission Concept Paper found in the Annex 1 of this Call for Proposals.

ANNEX 1: "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[21]. 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. What are AI Factories?

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[22]). 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

[21] 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.

[22] '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.

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 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[23]. On the other hand, provision of services to big industry should be fee-based.

1) AI Factories - Key Features to consider from a national perspective

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

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

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

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[24] 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.

[24] Findable, accessible, interoperable, and reusable

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 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[25] 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[26]:** 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.
- **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

[25] Input/output operations.

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

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.

ANNEX II

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:

"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.

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.

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.

ANNEX III

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.

INFRASTRUCTURE PILLAR

Ongoing activities:

The JU's Infrastructure strategy will continue to be implemented in 2025.

- The first exascale supercomputer to be located in Jülich Supercomputing Centre in Germany will be operational in 2025.
- The Greek mid-range supercomputer is being procured and will be inaugurated in 2025
- The Lisa/Leonardo upgrade is being procured and will be inaugurated in 2025.
- The Discoverer + upgrade will be fully operational in Q1 2025
- In 2024, the JU finalised the procurements of the six quantum computers. Two new hosting entities, Luxembourg and the Netherlands have been confirmed and procurement for two additional quantum computers will begin in 2025.
- The JU will finalise the procurement of its second exascale supercomputer, Alice Recoque, to be located in France.
- In 2025, the Arrhenius mid-range supercomputer, based in Sweden will be inaugurated.
- In order to develop a fully operational access capacity for users of EuroHPC Systems, the JU will update its access procedures in line with the amended access policy adopted in 2024.

CONNECTED AND FEDERATED SUPERCOMPUTERS PILLAR

Ongoing activities:

Procurement of connected HPC infrastructure and services

Following the results set out in the 'Study for Hyper-connectivity for HPC resources" (EuroHPC/LUX/2022/OP/01), which provided a comprehensive analysis of the communication and/or connectivity services needed for EuroHPC infrastructure and other relevant European and national supercomputing and data infrastructures; the JU launched a call for tender for *Acquisition of Hyperconnectivity Services for HPC Systems in Europe.* This call for tender will be managed during 2025.

Procurement of Federating Supercomputers and services

In 2023, the JU launched a call for tender for the deployment and operation of a platform for federating resources (including high performance computing, quantum computing and data management resources) providing Union-wide, cloud-based secure services for a wide range of public and private users across Europe. This procurement was launched in 2023 and will be fully operational across all EuroHPC Hosting Entities by 2025.

TECHNOLOGY PILLAR

Ongoing Activities

A number of Horizon 2020 grants managed by the JU concluded in 2024. The portfolio includes, for example, the development of software for future European supercomputer architectures, a European high-speed interconnect and a RISC-V based processor.

The JU launched a FPA RISC-V call in 2023 and the follow-up SGA (HORIZON-EUROHPC-JU-2022-TECH-03) was launched in 2024. A Pre-Commercial Procurement (PCP) that appeared in Work Programme 2023 is cancelled by the Governing Board.

A call on Innovation Action in Low Latency and High Bandwidth Interconnects was awarded in 2024. The JU also awarded the launched the HPC Energy efficiency R&I Call to develop new technologies that will reduce the energy consumption of future EuroHPC supercomputers in 2024.

A call to develop new benchmarks for HPC, Quantum Computing, and AI was launched in 2024.

Calls in 2025

Advancing quantum-enhanced machine learning

Expected outcome:

Proposals under this call aim to achieve transformative advancements in the integration of Artificial Intelligence (AI), notably Machine Learning (ML), with quantum technologies. The expected outcomes include:

- Techniques utilizing quantum processors and simulators as pre-processing stages for AI, leading to improvements in processing speed, computational complexity, modelling accuracy, and reduction in the number of samples needed, at scales achievable in the near- to mid-term (hundreds of physical qubits).
- Development of hybrid systems combining quantum processors and existing High-Performance Computing (HPC), including hybrid algorithms, to enhance AI capabilities.
- Creation of novel Quantum Machine Learning (QML) algorithms and their integration with existing AI frameworks, expanding computational capabilities and transforming traditional AI systems into more efficient solutions.
- Discovery of new near-term quantum algorithms to enhance AI performance.
- Development of scalable QML models and algorithms that combine quantum computing's power with machine learning for faster data processing and improved prediction accuracy in fields like hydrologic research, climate modelling, terrain classification in satellite remote sensing data, drug discovery, and image-based medical diagnosis.

Scope:

The focus of this call is to encourage and support innovative research and development projects that integrate Artificial Intelligence (AI) and quantum computing. Projects should explore scenarios where quantum processors and High-Performance Computing (HPC) are combined into hybrid systems, including hybrid algorithms, to enhance AI capabilities. Emphasis is placed on utilizing quantum processors and simulators as pre-processing stages for AI, achieving overall improvements in processing speed, computational complexity, modelling accuracy, and reducing the number of samples needed, at scales achievable in the near- to mid-term (hundreds of physical qubits).

This includes the development and evaluation of scalable Quantum Machine Learning (QML) systems that can handle massive data and complex computations. Resource estimation is important to identify the expected usefulness and timelines for the deployment of quantum technologies in AI applications.

Efficient training of classical models using quantum computers is another key area, including neural networks and deep reinforcement learning with applications such as autonomous driving. Proposals could address efficient solutions to hard problems in AI using quantum computers, such as coalition problems with applications in renewable energy distribution, bin packing with applications in logistics, job-shop scheduling with applications in industrial production, and image analysis.

The scope includes the development of scalable QML models and algorithms that combine the power of quantum computing with machine learning for faster data processing and improved prediction accuracy in fields like hydrologic research, climate modelling, terrain classification in satellite remote sensing data, drug discovery, and image-based medical diagnosis.

Indicative Budget:

An EU contribution of EUR 8 Million (50% of total funding) will be allocated for the support action.

Post-exascale computing (RIA)

High Performance Computing (HPC) has recently reached the Exascale computing performance, opening a new era of post-exascale computing in which solutions based on "business as usual" will simply not work. HPC is already confronted to a rapidly changing computing environment, for example with the emergence of extremely large AI models (e.g. LLM, multimodality, Generative AI, etc.), which require huge computing capacity with heterogeneous accelerated architectures combined with massive storage and complex data management. This new complex environment entails a whole new set of challenges not only for HPC technologies but also for key applications, as existing methods will not be effective to harness and fully exploit post-exascale environments which require a radical change in code development methodologies and frameworks supporting such applications.

Post-exascale is not just characterized by a huge computational performance in terms of floating point operations per second (FLOPS), but also by an increasing heterogeneity of computing platforms and architectures, the renaissance of AI (in particular generative AI) and the convergence of HPC with AI and Big Data, the need for energy-efficient and more sustainable systems, the shift from classic 64-bit to AI-driven models with reduced precision, the new approaches to traditional modeling and simulation, etc., combined with and the new usage models of supercomputers driven by the changing demands of users and applications.

It is urgent for Europe to stay at the forefront of the world efforts in HPC with a strong action to support the European HPC ecosystem to lead the way in this new post-exascale era, ensuring current and future social, scientific and industrial progress in a wide range of disciplines and applications. This action will strongly support European digital sovereignty with autonomous and sustainable European solutions that will be developed, integrated and deployed in the future post-exascale computing infrastructure, representing a strategic alternative to the dependence on technology from our global competitors.

Scope

Proposals are invited to address current or longer-term research challenges across the whole HPC system stack, affecting software stacks, libraries, interconnects, storage, hardware, application co-design, etc. in the post-exascale era and that will shape the next generation of HPC software environments. Proposals should address one or more of the following topics, addressing additional topics if relevant:

- Development of a European post-exascale HPC software stack, from low-level software to application support, offering generic, portable, interoperable, reusable, sustainable and cross-domain solutions.

- Development of hybrid AI/HPC elements of the post-exascale software stack necessary to accelerate HPC use for AI and to provide AI at scale for science, covering and integrating existing and upcoming AI/ML and data science frameworks/tools/libraries/compilers/etc., and providing interfaces between traditional HPC libraries and the AI/ML frameworks.
- Methods for a comprehensive support for performance optimization in the post-exascale era, including novel integrating tools and mechanisms to monitor, measure, analyse and compare performance metrics across the software stack and at new complex environments, ensuring detailed insights into system behaviour and optimization opportunities.
- Methods for a sustainable HPC software production, integration, management and installation model, fostering the use/reuse of modular/interoperable and portable SW components for fast integration and development, through modern software packaging and contributing to an "industrial" software production environment towards a "As a Service" model.
- Software/application co-design, supporting application transition to post-exascale, portability and sustainability and helping communities to face the challenges of the heterogeneous post-exascale environments.

Examples of issues that could be addressed are the shift from classic 64-bit algorithms to AI-driven models and mixed precision computing; post-Exascale application-driven software stack; high-productivity programming interfaces, sustainable software development, productization and maintenance, including tailoring and customisation of the software stack to different HPC systems and environments; services and workflows fostering sustainability re-use/modularity/interoperability etc., and support for hybrid HPC/AI workflow design. Additional issues are hiding hardware complexity to improve productivity, portability, and composability; asynchronous parallelism with dynamic optimizations to improve scalability; post-exascale mathematics and algorithms, adaptive mesh refinement, mixed precision, energy-aware algorithms; AI for automatic scientific code generation, addressing code robustness and efficiency; physics-based AI and hybrid simulation models, surrogate models, observational data reduction, HPC for distributed AI models; The above list of issues is not exhaustive, and proposers are invited to identify and justify any other relevant research challenges.

Proposals should build where appropriate on the work developed or driven by European stakeholders and reusing as possible software components from national and European projects and initiatives. In line with Horizon Europe rules, these different projects need to be developed in coordination with each other, in order to ensure convergence on the final outcome.

Expected outcome:

- Supporting European digital sovereignty with autonomous and sustainable European solutions that will be developed, integrated and deployed in the future post-exascale computing infrastructure, representing a strategic alternative to the dependence on technology from our global competitors.
- State-of-the-art advances in critical post-exascale research challenges in all areas of the HPC system stack and software environment, including a hybrid European HPC/AI software stack
- Accelerate the diffusion and application of HPC for AI at all stages and broadening the use base
- Reducing the costs of building and deploy applications on exascale and future post-exascale infrastructures
- Capitalizing on and consolidating software production in Europe while ensuring software sustainability, and supporting and actively drive efforts in standardization where applicable
- Development of an "industrial" production environment converging towards "As a Service" for HPC/AI use

Indicative Budget:

This topic will support Research and Innovation Actions of up to 5 Million of EU funding each. An EU contribution of EUR 20 Million (50% of total funding) will be matched by a PS contribution of EUR 20 Million (50% of total funding).

APPLICATIONS PILLAR

Ongoing Activities:

The latest HPC Centres of Excellence selected in 2023 will be operational between 2024 and 2026.

The European Quantum Excellence Centres (QECs) in applications for science and industry, launched in 2023, with the evaluations taking place in 2024, will be operational between 2025 and 2028.

The EuroHPC Inducement Prize for Quantum Computing and Simulation Applications, which appears in Work Programme 2023 will be launched in 2026, once the EuroHPC Quantum Computers are operational.

Strategy on the Application Pillar

In 2024, the Governing Board discussed a strategy on next steps in the Applications Pillar and calls to implement this strategy will be confirmed in this Work Programme, confirming activities that are committed in 2024, 2025 and possibly in 2026.

Budget allocation for the Applications Pillar

In 2024, an EU contribution from the Horizon Europe Programme of EUR 28 Million (50% of total funding) will be matched by a PS contribution of EUR 56 Million (50% of total funding).

In 2025, another EU contribution from the Horizon Europe Programme of EUR 20 Million (50% of total funding) will be matched by a PS contribution of EUR 40 Million (50% of total funding).

Amendment 3 of this Work Programme has allocated the following funds to the Call on HPC Centres of Excellence and HPC Lighthouse Codes:

- EUR 20 Million of 2024 contributions (Horizon Europe)
- EUR 20 million of 2025 contributions(Horizon Europe)
- EUR 20 million to be committed as from 2026 (Horizon Europe)

Furthermore in 2026, an additional EU contribution from the Horizon Europe Programme of EUR 40 Million (50% of total funding) could be matched by a PS contribution of EUR 40 Million (50% of total funding) on two calls – the Workflows and Services in new computing environments (RIA) and the Code reengineering in new HPC/AI environments - HPC for AI/AI for HP (RIA) (see below)

Calls in 2025:

Call - Call on HPC Centres of Excellence and HPC Lighthouse Codes (RIA)

HORIZON-JU-EUROHPC-2026-COE-LH-01

Overview of this call

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million) 2025	Expected EU contribution per project (EUR million)[27]	Indicative number of projects expected to be funded
Opening: 10 Jun 2025 **Deadline(s): 20 Jan 2026**				
HORIZON-JU-EUROHPC-2026-COE-LH-01-01: Community Centres of Excellence	**HORIZON-JU-RIA**		**2.00 to 4.00**	**10**
HORIZON-JU-EUROHPC-2026-COE-LH-01-02: Transversal Centres of Excellence	**HORIZON-JU-RIA**		**1.00 to 2.50**	**4**
HORIZON-JU-EUROHPC-2026-COE-LH-01-03: Lighthouse Codes for HPC Applications	**HORIZON-JU-RIA**		**1.00 to 1.50**	**8**
Overall indicative EU budget		**60.00**		

General conditions relating to this call

European HPC user and developer communities are world leaders in HPC application use and development in several domains. However, major developments in HPC hardware, system architecture and complex use cases, including data- and AI driven applications, are underway. This calls for action at European level in HPC applications, to sustain leadership and competitiveness, develop additional capabilities and establish an effective innovation value chain using the rapidly expanding European HPC infrastructure.

In order to allow a balanced coverage between topics, the following minimum amounts of JU contribution will be allocated to proposals eligible for funding:

- **HORIZON-JU-EUROHPC-2026-COE-LH-01-01: minimum EU contribution of EUR 30 million;**
- **HORIZON-JU-EUROHPC-2026-COE-LH-01-02: minimum EU contribution of EUR 6 million.**
- **HORIZON-JU-EUROHPC-2026-COE-LH-01-03: minimum EU contribution of EUR 8 million.**

Proposals are invited against the following topic(s):

HORIZON-JU-EUROHPC-2026-COE-LH-01-01: Community Centres of Excellence

Specific conditions

27 Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Expected EU contribution per project	**The Commission estimates that an EU contribution of between EUR 1.00 and 4.00 million for a duration of 36 months would allow these outcomes to be addressed appropriately.**
Indicative budget	**The total indicative budget for the topic is EUR 60.00 million.**[28]
Type of Action	**HORIZON JU Research and Innovation Actions**
Admissibility conditions	**The page limit of the application is 70 pages.**
Eligibility conditions	**In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely considering that** • **The Centres of Excellence (Community and Transversal) and Lighthouse codes will cover advances of targeted HPC applications towards highly scalable, optimised flagship codes and exascale performance, which are highly sensitive from a security and digital autonomy perspective, as they are part of Europe's critical European HPC infrastructure and ecosystem whereby their integrity, resilience and security have to be duly safeguarded from cyber-attacks and other security threats, and given their key role in the functioning of EU's data infrastructures and, given the potential sensitivity of the data processed (including for instance drug discovery testing and/or nuclear research simulations);** • **The actions implemented by the Centres of Excellence (Community and Transversal) and Lighthouse Codes might address real time critical applications during emergency situations using dedicated supercomputing resources (meant to, for example, save lives by promptly forecasting and mitigating the impacts triggered by natural disasters) the EU needs to avoid a situation of technological dependency on a non-EU source for close-to-market critical technologies;** **Participation is limited to legal entities established in eligible countries described in Annex B of the Horizon Europe Work Programme General Annexes.**
Legal and financial set-up of the Grant Agreements	**Beneficiaries will be subject to the following additional obligations regarding open science practices:** • **Coordinated provision of software, algorithms and relevant information to use and validate applications/tools without undue delay to the wider European HPC user community, in particular at all participating supercomputing centres, and in collaboration with linked actions.** **Grants awarded under this topic will have to submit the following additional deliverable(s):** • **data management plan (to be submitted at the beginning, at mid-term and towards the end of the project);**

28 This budget is shared with topic HORIZON-JU-EUROHPC-2026-COE-LH-01-02, HORIZON-JU-EUROHPC-2026-COE-LH-01-03

	• communication plan (to be submitted 6 months after the beginning of the grant together with the D&E plan); • plan for the dissemination and exploitation of results (to be submitted 6 months after the beginning of the grant, and towards the end of the project); Beneficiaries will be subject to the following additional dissemination obligations: - Dissemination of training activities in collaboration with linked grants and relevant Coordination and Support Actions as a coordinated training programme. As an exception from General Annex G of the Horizon Europe Work Programme, the EU-funding rate for eligible costs in grants awarded by the JU for this topic will be up to 50% of the eligible costs.
Other conditions	The requested resources should be commensurate with the number of application codes and the scope of work planned for each, ensuring appropriate alignment between resources and effort. It is expected that proposals for Community CoEs include substantial development work on a collection of clearly identified application codes, ensuring that this collection meaningfully addresses the diverse needs of the target user community. Furthermore each of the codes demonstrates European dimension and broad HPC user community beyond the consortium members. A maximum of one grant will be awarded that involves a specific activity within the scope of a particular HPC application. For example, development work for one specific software will be funded in a maximum of one grant among all topics of this call.
Evaluation and award procedure	To ensure a balanced portfolio covering different domains and technical challenges, grants will be awarded not only in the order of ranking but also to proposals covering domains and technical challenges not represented in higher ranked proposals in the order of ranking and provided that the applications attain all thresholds. In case of several proposals with significant overlap in technical or scientific domain, scope, consortium composition or targeted community, only the higher ranked proposal will be retained for funding.

Expected Outcome: Community CoEs must demonstrate scientific and technical excellence while ensuring impact at the wider European HPC community including the European industry and/or academia. Proposals should carry out a well-chosen subset (not necessarily all) of the following actions:

- Identify Targeted Applications & User Communities. Clearly define the software codes to be developed, enhanced or optimised, their ownership/licensing schema, and the impact on European HPC users, ensuring a broad and diverse innovation ecosystem. Describe the European user communities of the targeted applications, the current and predicted use on EuroHPC infrastructure/AI Factories as well as the impact of the planned developments on the European users.
- Deliver Highly scalable, optimized codes for Exascale or post-exascale/ advanced AI. CoEs should address frontier technical HPC/AI challenges, including load balancing, resilience, heterogeneity, and engage with

AI-driven developments, ensuring scientific applications are fit-for-purpose in the AI and post-exascale era. CoEs should ensure co-design with HPC hardware and software developers and providers.

- **Include activities to improve the energy efficiency of applications, algorithms, methods, libraries, and/or tools.**
- **Training & Capacity Building. Contribute to the overall training and skills activities, jointly with AI Factories, HPC National Competence Centres to address the skills gap and enable cross-sector AI-HPC adoption.**
- **Maximize Impact through Collaboration. Proposals should– where relevant and appropriate - establish strong links with:**
  1. **transversal CoEs, Lighthouse Codes;**
  2. **the Support Centre for HPC-powered AI Applications, ensuring mutual benefit between HPC code developers and real-world users;**
  3. **national and EU-funded projects, fostering technology transfer and best practices at the European level.**
- **Connect the Community CoE to national scientific communities inviting them to get involved in the activities developed and use their services.**

Scope: Community Centres of Excellence (CoEs) are advancing the transition towards more performant and scalable codes, up to exascale and post-exascale including advanced AI capabilities by developing or scaling up existing parallel codes, resulting into effective applications to solve scientific, industrial or societal challenges and addressing the needs of the user communities, advancing high-performance computing (HPC) & AI applications that operate at the frontier of technology, and providing cutting-edge capabilities for the European HPC user community.

These Community CoEs will play a strategic role in pushing applications code to the next level, where possible up to exascale and post-exascale level including advanced AI capabilities. Proposals must demonstrate the key position of their application codes in their communities, describe their current status of development (e.g., performance, scalability, portability, etc.), and convincingly present their strategy and path for improvement towards their targeted next level. They should also describe how the related gain translates into a positive impact in their community. These CoEs will work closely with other HPC stakeholders e.g. relevant high-performance computing (HPC), scientific, and industrial communities to (i) enhance application performance and exploit advanced computing capabilities, (ii) develop and scale up existing application codes towards the next level up, reaching exascale performance, (iii) deliver tangible benefits for scientific and industrial challenges, (iv) provide user-focused and inclusive support, enabling new and underrepresented communities to leverage HPC/AI infrastructures effectively, (v) deliver training activities on the actions developed within the scope of the CoEs, (vi) ensure multidisciplinary collaboration where relevant in order to integrate expertise in application domains, HPC systems, software, and algorithms.

This call builds upon and complements HORIZON-EUROHPC-JU-2023-COE-03-01 and HORIZON-EUROHPC-JU-2023-COE-01-01 and should associate where relevant with the following actions: HORIZON-JU-EUROHPC-2026-COE-LH-01-02 and HORIZON-JU-EUROHPC-2026-COE-LH-01-03.

The call is expected to support:

- **The development of HPC-ready applications with clearly defined objectives and a clear roadmap for bringing the targeted applications to the next level of maturity and scalability.**
- **A user-driven approach, connecting CoEs with developers, HPC users, industrial and scientific communities.**

- **Ensuring coordinated efforts with EuroHPC, Artificial Intelligence (AI) Factories, and national HPC programs.**

Community CoEs should clearly define the targeted application(s), user communities, and performance needs, while presenting a detailed development plan with key performance indicators (KPIs), milestones, and deliverables and show European added value.

All Community CoEs should be driven by user needs and specifically target European users beyond the CoE consortium to create wider impact. CoEs should be inherently committed to co-design activities (e. g. in collaboration with any relevant transversal CoE) to ensure that future HPC architectures are well suited for the applications and their users (both from academia and industry), providing a high performance and scalable application base.

CoEs should federate existing resources around Europe, exploiting available competences, and ensuring multidisciplinary (combining application domain and HPC system, software and algorithm expertise) and synergies with national/regional programmes.

CoEs should further enlarge and expand these capabilities all over Europe, in particular by including user communities from EU widening countries and countries associated to Horizon Europe that are members of the EuroHPC Joint Undertaking currently developing and advancing their HPC infrastructure and ecosystem.

Proposals should be able to articulate clearly the scientific grand challenges which will be addressed by the applications and justify the advanced HPC performance needs.

Proposals should also develop synergies with preceding and existing CoEs where relevant. Should the proposed work target an area or domain already covered by former or existing CoEs, proposals must clearly elaborate on how their proposal further expands beyond previous work (e.g., new codes, codes upgraded/enhanced or ported to exascale/post-exascale/AI-optimized domains, new user communities, etc.), and avoid any kind of work duplication/overlap.

HORIZON-JU-EUROHPC-2026-COE-LH-01-02: Transversal Centres of Excellence

Specific conditions	
Expected EU contribution per project	**The Commission estimates that an EU contribution of between EUR 1.00 and 2.50 million for a duration of 36 months would allow these outcomes to be addressed appropriately.**
Indicative budget	**The total indicative budget for the topic is EUR 60.00 million.**[29]
Type of Action	**HORIZON JU Research and Innovation Actions**
Admissibility conditions	**The page limit of the application is 70 pages.**
Eligibility conditions	**In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely considering that** • **The Centres of Excellence (Community and Transversal) and Lighthouse codes will cover advances of targeted HPC applications towards highly scalable, optimised**

29 This budget is shared with topic HORIZON-JU-EUROHPC-2026-COE-LH-01-01, HORIZON-JU-EUROHPC-2026-COE-LH-01-03

	flagship codes and exascale performance, which are highly sensitive from a security and digital autonomy perspective, as they are part of Europe's critical European HPC infrastructure and ecosystem whereby their integrity, resilience and security have to be duly safeguarded from cyber-attacks and other security threats, and given their key role in the functioning of EU's data infrastructures and, given the potential sensitivity of the data processed (including for instance drug discovery testing and/or nuclear research simulations); • The actions implemented by the Centres of Excellence (Community and Transversal) and Lighthouse Codes might address real time critical applications during emergency situations using dedicated supercomputing resources (meant to, for example, save lives by promptly forecasting and mitigating the impacts triggered by natural disasters) the EU needs to avoid a situation of technological dependency on a non-EU source for close-to-market critical technologies; Participation is limited to legal entities established in eligible countries described in Annex B of the Horizon Europe Work Programme General Annexes.
Legal and financial set-up of the Grant Agreements	Beneficiaries will be subject to the following additional obligations regarding open science practices: • Coordinated provision of software, algorithms and relevant information to use and validate applications/tools without undue delay to the wider European HPC user community and in collaboration with linked actions. Grants award under this topic will have to submit the following deliverable(s): • data management plan (to be submitted at the beginning, at mid-term and towards the end of the project); • communication plan (to be submitted 6 months after the beginning of the grant together with the D&E plan); • plan for the dissemination and exploitation of results (to be submitted 6 months after the beginning of the grant, and towards the end of the project); Beneficiaries will be subject to the following additional dissemination obligations: - Dissemination of training activities in collaboration with linked grants and relevant Coordination and Support Actions as a coordinated training programme. As an exception from General Annex G of the Horizon Europe Work Programme, the EU-funding rate for eligible costs in grants awarded by the JU for this topic will be up to 50% of the eligible costs.
Evaluation and award procedure	To ensure a balanced portfolio covering different domains and technical challenges, grants will be awarded not only in the order of ranking but also to proposals covering domains and technical challenges not represented in higher ranked proposals in the order of ranking and provided that the applications attain all thresholds. In case of several proposals with significant overlap in technical or scientific domain, scope,

	consortium composition or targeted community, only the higher ranked proposal will be retained for funding.

Expected Outcome: The Transversal CoEs will play a pivotal role in strengthening the European HPC and AI ecosystem by providing dedicated critical expertise, tools, and services to support HPC application developers and advanced users in addressing cross-cutting challenges. In particular, they should lead to the following outcomes:

- **Enhanced performance and efficiency of HPC/AI applications, achieved through dedicated support to application developers, including in-depth performance assessments, tailored optimization recommendations, proof-of-concept implementations, correctness-checking, energy-efficiency studies, and continuous advisory services.**
- **Stronger integration of tool development with application user and developer needs, by implementing effective feedback loops focusing on advanced profiling, debugging, and performance-tuning solutions and other aspects of relevance. This integration will benefit multiple application communities, and such benefits should be clearly described and justified in the project proposals - ideally including ways to quantify the positive impact on these communities by the end of the project.**
- **Enhanced interoperability across the computing continuum including but not limited to interoperability cloud and HPC/AI environments, addressing key challenges such as security, data privacy, resilience, and fault tolerance, and prioritising energy-efficient software optimisation to enhance system sustainability.**
- **Increased and improved knowledge transfer and skills development in HPC and AI integration, through structured training programs provided by transversal CoEs. These could include workshops, hands-on tutorials, and webinars on topics such as HPC performance optimisation, AI-enhanced applications, and hybrid cloud-HPC/AI workflows, ensuring broad access to cutting-edge expertise across Europe.**
- **Stronger coordination and collaboration across the European HPC ecosystem, with transversal CoEs serving as key enablers of knowledge and best-practice exchange in a specific, coherent and cross-cutting technical domain. By engaging with Community CoEs, Lighthouse Codes, the Support Centre for HPC-powered AI Applications and national/EU-funded initiatives, they will foster synergies across academia, industry, and research institutions to accelerate the adoption of advanced technical solutions.**
- **Uptake of new tools, technologies, methods and processes by HPC application developers to support, for example, the modernisation and refactoring of codes, portability, the adoption of malleability concepts, and faster R&D cycles through rapid testing and delivery of new code to users.**

Scope: Transversal Centres of Excellence (CoEs) will play a strategic role in enabling the next generation of high-performance computing (HPC) applications by providing essential expertise, tools, and support to European HPC application developers. As the demand for computational power, AI integration, and large-scale simulations continues to grow, it is critical to establish technical hubs that can bridge the gap between cutting-edge HPC infrastructure and application developers. These centres will streamline software development and deployment, optimize performance, and facilitate the adoption of best practices, standards, and emerging HPC technologies across diverse scientific and industrial domains.

Transversal Centres of Excellence will increase adoption and broader dissemination of state-of-the-art HPC software development tools, technologies, and best practices among HPC application developers. They will strengthen technical skills and expertise within the HPC application development community and will harmonize performance standards and metrics for HPC applications and systems, ensuring consistency across the European HPC ecosystem.

This action aims to establish Transversal Centres of Excellence (CoEs) that serve as technical hubs for HPC application developers. These CoEs will provide specialised technical support in areas such as application profiling, pre-/post-processing, performance optimization, application delivery, co-design, and the integration of data and AI technologies. The initiative will help to streamline and enhance the development, deployment, and optimization of HPC applications across different domains.

This call builds upon and complements HORIZON-EUROHPC-JU-2023-COE-03-01 and HORIZON-EUROHPC-JU-2023-COE-01-01 and should associate where relevant with the following actions: HORIZON-JU-EUROHPC-APP-COE-LH-02-01, and HORIZON-JU-EUROHPC-APP-COE-LH-02-03.

Objective: Proposals must address one specific, well-defined and coherent transversal technical area that supports HPC application development. The focus will be on pooling European expertise and resources to provide technical assistance and services to HPC application developers, for example in one or several of the following cross-cutting domains (this list is not exhaustive and very different topics can be proposed, explaining in each case how diverse application communities will benefit from the proposed developments):

- **Application profiling and performance optimization**
- **Application deployment and delivery**
- **Application portability**
- **Co-design and cooperation with HPC vendors and architects**
- **Automated testing, validation, integration and delivery of applications and code**
- **Code adaptation to computing continuum (HPC cloud, etc)**
- **Data processing, interoperability, reusability, and standardization**
- **Resilience and Fault tolerance**
- **Security and data privacy**
- **Heterogeneous, energy-efficient computing and system scalability**

Transversal CoEs will offer advanced training on commonly used HPC development tools and technologies, with close collaboration with the AI Factories, EuroHPC Academy and existing EuroHPC training activities. Proposals are expected to contribute substantially to the EuroHPC's training portfolio, ensuring accessibility and knowledge transfer across European HPC/AI communities.

Additionally, proposals should establish strong links with other initiatives under the EuroHPC Applications and Technologies pillar, including:

- **Community CoEs**
- **Energy-efficient computing technologies**
- **Microprocessor and system software development**
- **Middleware solutions**
- **Common standards and metrics for HPC architectures Transversal CoEs will also play a crucial coordination role, bridging activities funded by EuroHPC Joint Undertaking (JU) calls, particularly between application developers and domain-specific Community CoEs.**

Transversal CoEs will also play a crucial coordination role, bridging activities funded by EuroHPC Joint Undertaking (JU) calls, particularly between HPC software engineers and Lighthouse Code developers as well as domain-specific Community CoEs.

Additional requirements:

- **Consortia should include a balanced composition of partners, integrating HPC specialists and domain experts with relevant technical expertise as appropriate.**
- **The participation of private sector entities is strongly encouraged to enhance industry collaboration and impact.**
- **Maximize Impact through Collaboration. Proposals should establish strong links with Community CoEs, Lighthouse Codes, and the Support Centre for HPC-powered AI Applications, ensuring mutual benefit between HPC code developers and real-world users, engage with national and EU-funded projects, fostering technology transfer and best practices at the European level, and ensure involvement in broader AI and HPC initiatives, including RISC-V, European Processor Initiative (EPI), and emerging AI Factories.**
- **While deviations are permissible if adequately justified, proposals should generally allocate at least 12 person months of resources for collaboration activities with other grants awarded under this call. The pre-allocated resources will be assigned to a collaboration task which will be defined after the evaluation together with EuroHPC JU and relevant other grants.**

HORIZON-JU-EUROHPC-2026-COE-LH-01-03: Lighthouse Codes for HPC Applications

Specific conditions	
Expected EU contribution per project	**The Commission estimates that an EU contribution of between EUR 1.00 and 1.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.**
Indicative budget	**The total indicative budget for the topic is EUR 60.00 million.[30]**
Type of Action	**HORIZON JU Research and Innovation Actions**
Eligibility conditions	**In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely considering that** • **The Centres of Excellence (Community and Transversal) and Lighthouse codes will cover advances of targeted HPC applications towards highly scalable, optimised flagship codes and exascale performance, which are highly sensitive from a security and digital autonomy perspective, as they are part of Europe's critical European HPC infrastructure and ecosystem whereby their integrity, resilience and security have to be duly safeguarded from cyber-attacks and other security threats, and given their key role in the functioning of EU's data infrastructures and,**

30 This budget is shared with topic HORIZON-JU-EUROHPC-2026-COE-LH-01-01, HORIZON-JU-EUROHPC-2026-COE-LH-01-02

	given the potential sensitivity of the data processed (including for instance drug discovery testing and/or nuclear research simulations); • The actions implemented by the Centres of Excellence (Community and Transversal) and Lighthouse Codes might address real time critical applications during emergency situations using dedicated supercomputing resources (meant to, for example, save lives by promptly forecasting and mitigating the impacts triggered by natural disasters) the EU needs to avoid a situation of technological dependency on a non-EU source for close-to-market critical technologies; Participation is limited to legal entities established in eligible countries described in Annex B of the Horizon Europe Work Programme General Annexes.
Legal and financial set-up of the Grant Agreements	Beneficiaries will be subject to the following additional obligations regarding open science practices: • Coordinated provision of software, algorithms and relevant information to use and validate applications/tools without undue delay to the wider European HPC user community, in particular at all participating supercomputing centres, and in collaboration with linked actions. Grants award under this topic will have to submit the following deliverable(s): • data management plan (to be submitted at the beginning, at mid-term and towards the end of the project); • communication plan (to be submitted 6 months after the beginning of the grant together with the D&E plan); • plan for the dissemination and exploitation of results (to be submitted 6 months after the beginning of the grant, and towards the end of the project); As an exception from General Annex G of the Horizon Europe Work Programme, the EU-funding rate for eligible costs in grants awarded by the JU for this topic will be up to 50% of the eligible costs.
Other conditions	The requested resources should be commensurate with the software development plan detailed in the proposal. A maximum of one grant will be awarded that involves a specific activity within the scope of a particular HPC application. For example, development work for one specific software will be funded in a maximum of one grant among all topics of this call.
Evaluation and award procedure	To ensure a balanced portfolio covering different domains and technical challenges, grants will be awarded not only in the order of ranking but also to proposals covering domains and technical challenges not represented in higher ranked proposals in the order of ranking and provided that the applications attain all thresholds. In case of several proposals with significant overlap in technical or scientific domain, scope, consortium composition or targeted community, only the higher ranked proposal will be retained for funding.

Expected Outcome: The Lighthouse Codes for HPC Applications will play a strategic role in developing globally competitive HPC application software and accelerating Europe's leadership in high-performance computing (HPC) applications. By integrating cutting-edge capabilities into production-grade software, these codes will enable scientific discovery, and drive cross-sector innovation. They will ensure long-term sustainability and scalability of Europe's HPC ecosystem.

This initiative will result in collaborations between researchers, industry, and HPC experts, promoting best practices in software development, optimization, and interoperability. By aligning with scientific grand challenges (e.g. fusion energy, development of high-capacity/low-cost batteries, AI-driven genomics-based personalized treatments or AI-driven cybersecurity), Lighthouse Codes will contribute to breakthroughs in scientific, industrial, and societal applications, strengthening Europe's technological autonomy and innovation capacity in the exascale and AI era.

Expected outcomes include:

- **Successful integration of cutting-edge capabilities into production-grade software, driving innovation and enhancing Europe's scientific excellence and industrial competitiveness.**
- **Enhanced scientific and engineering productivity: Consolidated and optimized Lighthouse Codes lower technical barriers, enabling faster and more accurate simulations and computations. This supports scientific discovery, advances engineering solutions, and drives cross-sector innovation.**
- **Well-documented, high-quality codebases with well-defined scope and functionality, passing rigorous validation and reproducibility standards.**
- **Stronger alignment with EU grand challenges, ensuring that Lighthouse Codes contribute to Europe's strategic priorities in science and industry.**

Scope: Central objective is the strategic and focused development of globally competitive HPC codes with high impact. This includes:

- **further developing existing Lighthouse Codes,**
- **but also consolidating, refactoring, redesigning or rewriting existing applications, which will result in a state-of-the-art Lighthouse Code during the implementation of the proposal, and making the Lighthouse Code accessible to the wider HPC user community.**

"Lighthouse Code" refers to an application, a software development kit (SDK)[31], or a software library which is distributed as a single package and meets the following broad criteria:

- **Established professional software development and management structures involving professional HPC software engineers, including policies to ensure quality, coherence and compliance of contributions with community standards and best practices.**
- **An established large or rapidly growing user community, demonstrated through appropriate KPIs (e.g., number of users/growth trend, downloads, HPC resource allocations).**

[31] 'software development kit (SDK)' refers to a collection of related and complementary software components within a functionality domain, developed by communities that work together with the objective of making the components interoperable to create additional value. In general, the development of these components relies on a set of policies, defined and enforced by the community involved in the SDK development, to adopt best practices, avoid duplicated functionality and achieve higher quality, productivity and sustainability

- **Processes for systematic documentation as part of the development process providing comprehensive documentation of functionality, ensuring usability for both users and developers, including APIs, user manuals, and developer guides.**
- **Commitment towards code stewardship by at least one eligible legal entity, ensuring ongoing maintenance, updates, and strategic development beyond the grant period.**
- **Competitive scalability in the respective domain, and availability across multiple supercomputing architectures, including heterogeneous and accelerated platforms.**
- **Potential for broad adoption and high-impact applications in scientific, industrial or societal domains.**
- **Ownership and licensing framework, allowing both open-source and proprietary codes to be included, provided that access and development rights are clearly defined and consortium members demonstrate the competence to control and further develop the code.**

The software developments will establish best practices among European contributors and lead to sustainable, globally competitive software that can significantly impacts the wider HPC ecosystem.

This call builds upon and complements HORIZON-EUROHPC-JU-2023-COE-03-01 and HORIZON-EUROHPC-JU-2023-COE-01-01 and should associate where relevant with the following actions: HORIZON-JU-EUROHPC-APP-COE-LH-02-01 and HORIZON-JU-EUROHPC-APP-COE-LH-02-02.

Lighthouse Codes are expected to demonstrate potential collaboration with relevant Centres of Excellence (CoEs) and the EuroHPC Academy, where appropriate, to benefit from the European community building and training efforts in key HPC domains.

Proposals should specify and describe the Lighthouse Code in detail. In this regard, communities are invited to present proposals which consolidate efforts dedicated, e. g. to multiple domain science codes, into one common Lighthouse Code.

Proposals clearly identify and describe the Lighthouse Code(s) to be developed or consolidated which must either already exist or, in exceptional and well-justified cases, be a state-of-the-art reimplementation of functionality of existing code. Each proposal may include only one Lighthouse Code. If an entirely new Lighthouse Code is proposed, it must be based on existing applications with high impact, for example in science and technology, and demonstrate a credible potential to meet the Lighthouse Code criteria within the project's duration.

Proposals should focus on the development, consolidation, or expansion of a Lighthouse Code with clearly demonstrated scientific, technical, or societal impact. A robust software development plan, including a well-defined scope, timeline, and sustainability strategy, should be central to the proposal.

Proposals should focus on at least one of the following activities, with clear, measurable KPIs and a detailed software development plan including regular milestones for all development lines:

1. **Code Development & Optimization: rewrite, transform or consolidate multiple codes with existing large user communities and high scientific impact into one, potentially new Lighthouse Code**
2. **consolidate, or integrate multiple high-impact codes to improve performance, usability, and sustainability within the HPC ecosystem.**
3. **Feature Enhancement: Implement new functionalities in an existing Lighthouse Code to extend its capabilities and improve usability.**
4. **Architecture Adaptation: Port Lighthouse Codes to new HPC architectures, including novel accelerator-based platforms.**

5. **Exascale/ AI Readiness: Implement post-exascale/ Advance AI capabilities, improving scalability and efficiency.**

Additional requirements:

- **Consortia should include a balanced composition of partners, integrating HPC specialists and domain experts with relevant expertise.**
- **Maximize impact through collaboration, establishing strong links with other actions supported under this call.**
- **Commitment towards the sustainability of the codes beyond the grant period which should be demonstrated by a letter of commitment from a participating legal entity that will provide stewardship for the Lighthouse Code.**
- **The participation of entities in the private sector is strongly encouraged, provided alignment with central business objectives is clearly demonstrated.**
- **Proposals should describe in detail how the software development process will be streamlined and managed, including all relevant IT tools e. g. for code and documentation management, test automation, quality assurance, continuous integration, continuous delivery, issue trackers, user feedback and monitoring dashboards. Applicants are encouraged to use best practice and automated workflows where appropriate to reduce administrative overhead and improve continuous reporting effort towards EuroHPC.**
- **Proposals should define and describe a mechanism how the specific developments resulting from the proposed work can be identified in the code.**
- **While deviations are permissible if adequately justified, proposals should generally allocate at least 12 person months of resources for portfolio activities. The portfolio activities, which refer to collaboration tasks with relevant initiatives under the same call, will be defined after the evaluation and implemented through a dedicated work package or task in the final Grant Agreement.**
- **While deviations are permissible if adequately justified, the overall resources allocated to non-technical work, such as project management, coordination, dissemination should generally not exceed 2% of the overall personnel resources. All participants are expected to contribute substantially (at least 5% of the total personnel resources) to the technical work and take responsibility for associated tasks and deliverables.**

Workflows and Services in new computing environments (RIA)

Proposals should work on workflows solutions and services for applications that will evolve in new environments where the convergence of AI/HPC/HPDA/Cloud/Edge create a "computing continuum", in particular in industrial environments. Examples of issues that could be addressed are new emerging usages models including urgent computing and HPC digital twins (online digital replicas) representing physical objects/processes and receiving real-time information from the physical object/process in various application areas for example engineering, logistics, production, health, etc. Workflows solutions and services for the convergence of AI/HPC/HPDA/Cloud/Edge are also part of this area as well as cloudification of HPC services provided by supercomputing centres. As part of the research topics, proposals should address (non-exhaustive) challenges related to the extreme volumes, speed and variety of data across the computing continuum.

Expected outcome:

- Advances in research challenges and novel workflows and services for applications in the Computing Continuum.

- New usage modes of HPC in computing continuum environments in wider and/or emerging HPC markets
- Coordinate efforts to share workflows solutions and services for the convergence of
- AI/HPC/HPDA/Cloud/Edge

This topic will support Research and Innovation Actions of up to EUR 5 Million of EU funding each. An EU contribution of EUR 20 Million (50% of total funding), to be committed in 2026, will be matched by a PS contribution of EUR 20 Million (50% of total funding).

Code reengineering in new HPC/AI environments - HPC for AI/AI for HPC (RIA)

The overall goal is to accelerate science-driven and engineering-driven solutions powered by the convergence and coupling of big data analysis and Artificial Intelligence (AI), and the availability of extreme computing resources in exascale and post-exascale HPC/AI environments. This calls for a radical change in code development methodologies and frameworks.

This objective addresses the reengineering and improvement of codes and solutions with new methods and algorithms where modelling, data and AI supported by extremely parallel computing are central. Examples of topics are the upgrade or reengineering of conventional mainstream HPC codes (including e.g. algorithms, numerical methods and solvers) to benefit from generative AI breakthroughs and the use of e.g. mixed precision, the adaptation and enabling of AI solutions for exa/post exascale to fully exploit the massive presence of GPUs in HPC environments, etc.

Proposals should clearly identify target codes, methods or algorithms that will be reengineered and adapted to benefit from the new HPC/AI environments.

Expected outcome:

- Adapted and optimised applications to new HPC/AI computing environments
- Novel solutions and transition to the converged HPC/AI post-exascale era benefiting HPC for AI and AI for HPC, including the use of AI to improve “traditional” HPC solutions and methods and the optimisation of AI solutions for HPC environments
- Addressing the wider and/or emerging HPC and AI markets taking into account the increasing presence of accelerated computing hardware in HPC installations.

Indicative Budget:

This topic will support Research and Innovation Actions of up to 5m of EU funding each.

An EU contribution of EUR 20 Million (50% of total funding), to be committed in 2026, will be matched by a PS contribution of EUR 20 Million (50% of total funding)

COMPETENCES AND SKILLS PILLAR

Ongoing activities:

In 2024, a call to include Competence Centres from Participating States who acceded to Digital Europe Programme was launched. The renewal of the EuroHPC Master programme was also launched in 2024. The second User Day took place in October 2024. The next User Day will take place, under Danish Presidency, on 30 September-1 October 2025.

Calls in 2025

National Competence Centres for High Performance Computing

Scope:

This new call aims to support existing or the creation of up to one new National Competence Centre (NCC) in EuroHPC JU Participating States and a related Coordination and Support Action for the NCCs.

The NCCs will provide HPC services to industry (in particular to SMEs), academia and public administrations, delivering tailored/modular solutions for a wide variety of users, with an aim to ease and foster the transition towards wider uptake of HPC in Europe. NCCs will be a focal point of HPC in the respective country, liaising with national initiatives in the area of HPC, facilitating access of national stakeholders to European HPC competences and opportunities in different industrial sectors and domains. SMEs will be central to the NCC's activities. Academic institutions and stakeholders may be addressed only to a limited extent and most of the resources of an NCC will be dedicated to support local SMEs, industry and public services with the uptake of HPC.

Indicative Budget:

An EU contribution, which will be committed in 2026, from the Digital Europe Programme of EUR 35 Million (50% of total funding) will be matched by a PS contribution of EUR 35 Million (50% of total funding) to fund a maximum of one National Competence Centre per country.

CSA to coordinate the National Competence Centres

Furthermore, the central objective of the Coordination and Support Action is to coordinate National Competence Centres in order to maximize existing European HPC knowledge and expertise across Europe. The tasks and services will provide a single focal point at European level and will be responsible for the coordination of the activities of the National Competence Centres (NCCs), the exchange of best practices within and between the all the National Competence Centres, facilitating the sharing of applications, knowledge and information, networking and training across NCCs. In order to accomplish these objectives, the selected consortium will also establish effective cooperations with other European initiatives, in particular with ongoing other European training activities on HPC and with the AI factories initiative.

Indicative Budget:

An EU contribution from the DIGITAL Europe Programme of 2 Million EU contribution (100% funding rate), which will be committed in 2026, for a linked Coordination and Support Action for the coordination of the National Competence Centres will be provided.

INTERNATIONAL COOPERATION PILLAR

The EuroHPC JU Regulation gives a mandate to the EuroHPC JU to implement cooperation and collaboration with third countries advancing the work on HPC applications in domains of common interest, including facilitating access for researchers to EuroHPC JU resources and co-development of HPC applications. EuroHPC JU will align its activities with the European Commission strategy on EU Digital Partnerships in order advance cooperation on digital issues with like-minded third countries.

Ongoing Activities

- In 2022 EuroHPC JU launched the call on collaboration on HPC with Japan
- In 2023, EuroHPC JU launched a call for collaboration on HPC with India
- In 2024, EuroHPC JU launched a call on collaboration on Quantum with Japan.

Calls in 2025:

Call - EuroHPC International Cooperation

HORIZON-JU-EUROHPC-2025-INCO-01

Overview of this call[32]

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million) 2025	Expected EU contribution per project (EUR million)[33]	Indicative number of projects expected to be funded
Opening: 04 Mar 2025 Deadline(s): 04 Jun 2025				
HORIZON-JU-EUROHPC-2025-INCO-01: International Collaboration on AI Factories and HPC-AI	HORIZON-JU-CSA	1.50	0.5 to 1.50	1
Overall indicative budget		1.50		

General conditions relating to this call

[32] Trillion Parameter Consortium (TPC).

[33] Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

The rapid advances in Generative Artificial Intelligence (GenAI), in particular in Large Language Models (LLMs), and the increasing challenges of effectively using exa and post-exascale HPC architectures to meet the demands of novel AI based applications are changing the whole HPC-AI ecosystem. The magnitude of such challenges is fostering an indispensable collaboration with the key stakeholders at world level that are currently gathering their efforts in major activities to tackle those challenges and prepare the future, in particular the Trillion Parameter Consortium (TPC)[14.] European initiatives, and in particular the AI Factories, must benefit from the active involvement of EU stakeholders to maintain their current and future competences in this fast-moving environment. It is therefore critical that Europe sends a clear signal of coordinated involvement with a support action so not to be just followers in this major initiative.

Proposals are invited against the following topic(s):

HORIZON-JU-EUROHPC-2025-INCO-01: International Collaboration on AI Factories and HPC-AI

Specific conditions	
Expected EU contribution per project	The JU estimates that an EU contribution of between EUR 0.5 and 1.50 million for a duration of 3 years would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 1.50 million.
Type of Action	HORIZON JU Coordination and Support Actions
Procedure	The granting authority can fund a maximum of one project.
Eligibility and admissibility conditions	Admissibility conditions: described in Annex A and Annex E of the Horizon Europe Work Programme General Annexes. Eligible countries: described in Annex B of the Work Programme General Annexes. A number of non-EU/non-Associated Countries that are not automatically eligible for funding have made specific provisions for making funding available for their participants in Horizon Europe projects. See the information in the Horizon Europe Programme Guide.
Legal and financial set-up of the Grant Agreements	Grants award under this topic will have to submit the following deliverable(s): • Communication plan (to be submitted 6 months after the beginning of the grant together with the Dissemination and Engagement Plan).

Expected Outcome:

- Strengthening the current and future capacities of the EU HPC-AI ecosystem, and in particular of AI factories, by supporting the active EU participation in the international initiatives for scientific and engineering massive GenAI HPC-based solutions.
- Delivery of a high-quality plan addressing the development of massive GenAI models for science in Europe.
- Ensuring that the EU's vision, priorities and ethical standards are well reflected in the discussions, roadmaps, and other technical activities and in the governance of the Trillion Parameter Consortium (TPC)[324].
- Contribution to the development of a competitive European converged HPC-AI ecosystem.
- Aligning the EU and national initiatives and bridging the gaps between EU and international efforts in these domains, and interaction and collaboration with other similar international efforts.
- Improving the sharing of information, best practice and expertise at European and world-level to address critical scientific challenges in these domains and ensuring that this knowledge is appropriately disseminated to key EU initiatives, in particular AI Factories.

Scope: Proposals are invited for a Coordination and Support Action to actively participate in the organisational and technical activities of the Trillion Parameter Consortium (TPC)[324] to guide and prepare European HPC for the convergence of supercomputing and AI in massive GenAI models for science. Proposals should demonstrate a clear link with the TPC, aiming at creating extreme - scale state-of-the-art trustworthy and reliable generative AI models and to address and discuss the related key challenges to support the advancing of AI for science using HPC.

Main activities:

- Coordinate and establish a EU-level representation in the governance of the TPC, ensuring the EU's views in strategic decisions and contributing to EU's sovereignty.
- Support the organisation and active participation of the EU stakeholders in technical activities such as roadmaps, working groups, dedicated workgroups, etc. of the initiative.
- Analyse the relevant research and operational challenges and produce and maintain high-quality research roadmaps with recommendations for research actions at the European level related to the TPC. Engage with and disseminate the results to the relevant European stakeholders and communities related to the TPC, to EuroHPC actors such as the RIAG, INFRAG, ETP4HPC, BDVA, and to other relevant projects and initiatives such as AI Factories, DARE FPA on RISC-V hardware, EuroHPC Hosting Entities, HPC Centres of Excellence (CoEs), etc.

The action should consist of a core consortium of key European players in the related domains, and should support the participation of individuals from other scientific and industrial players and organisations in Europe that are considered necessary for the success of the goals of the proposal and related to the main activities of the TPC.

International cooperation on HPC with third countries (Latin America)

The aim is to develop a strategic partnership in HPC with one target region (Latin America) enabling closer research cooperation in HPC and HPC powered applications. This topic will support one Coordination and Support Action (CSA), and only one proposal shall be selected per target region.

Expected Outcome:

- Strengthening the HPC ecosystem in the EU and in the target region by enabling HPC stakeholders to enhance HPC applications and codes in academic and industrial cases of common interest
- Improved international cooperation of EU with the research and industrial HPC communities of the targeted region on advanced HPC application development with a roadmap for future collaboration in targeted areas.
- Promote the exchange of best practices between the European and regional HPC research communities, including the improved sharing of information and expertise to solve common societal problems with the use of advanced computing, and the exchange of HPC researchers.

Scope:

- Development of a realistic HPC research cooperation roadmap with clearly identified application areas of common interest.
- Identify key HPC application areas and hardware/system requirements in the target regions of common interest with the EU
- Identify relevant national, regional and international funding schemes of HPC in the target region
- Organise meetings, thematic workshops and summer schools in areas of common interest, identifying best practices, information sharing mechanisms, exchange of HPC researchers mechanisms, etc.

Indicative Budget:

An EU contribution of EUR 3 Million (100% of total funding) will be allocated for the support action.

Support to the International HPC Summer School

Scope:

The aim of this action is to collaborate internationally with key partners by promoting the skills development of highly educated scholars and HPC talents. Therefore, the action supports the organisation of the International HPC Summer Schools in collaboration with US, Japan, Canada and other countries to provide financial support for the participation of European students.

The International HPC Summer School will give the possibility to the best students in HPC focussed programmes to access training reflecting state-of-the-art aspects related to HPC. The International HPC Summer School on HPC Challenges in Computational Science brings together once a year about 80-100 participants.

Indicative Budget:

An EU contribution from the Horizon Europe of EUR 1 Million (100% of total funding) to support the International HPC Summer Schools 2026-2031.

ADMINISTRATION

Communication and stakeholder engagement

In 2025, the EuroHPC will continue disseminating the results of EU funded HPC activities implemented by the JU.

- **Online Dissemination of EuroHPC JU Activities and Opportunities**

In 2025, the JU will continue upgrading its online presence thanks to an improved website, becoming the single gateway to find information on EuroHPC JU activities, calls, opportunities and request access EuroHPC supercomputers. It will also add features to support EuroHPC public and private members to provide funding information.

- **Organisation of workshops to support and promote operational EuroHPC JU activities**

The JU will organise a number of workshops in order to engage with stakeholders in the HPC and Quantum communities in order to promote operational activities.

The JU will host regular monthly online meetings of the EuroHPC Hosting Entities. Up to two in person meetings may take place and be hosted, with support from the JU, in a Hosting Entity.

In addition, the JU will fund travel and an accommodation allowance (one night per meeting per expert) for up to two in person RIAG and INFRAG meetings in 2025 in Luxembourg, Brussels and/or during the annual EuroHPC Summit or the annual User Day meeting.

- **Organisation of events and meetings in the European Parliament**

In 2025, the EuroHPC JU will organise events in the European Parliament aimed at introducing its mission, achievements, and future opportunities to the newly elected Members of the European Parliament (MEPs). With the beginning of the new legislative term, this timing is crucial for raising awareness and fostering support for EuroHPC JU's initiatives, as the MEPs will be shaping EU policy for the next five years. Some of these events will be co-organised with other EU Joint Undertakings, further demonstrating the collaborative efforts of various sectors working towards shared European goals.

- **EuroHPC Summit 2025**

The EuroHPC Summit 2025 will take place in Poland on 18-20 March 2025, during the Polish EU Presidency. The organisation of this event will begin in 2024 and will base itself on the best practice and experience of EuroHPC Summit 2024. An estimated budget of EUR 700,000 will be allocated from DEP operational activities.

The event will gather key European HPC stakeholders, from providers to scientific and industrial users, to policy makers. As in 2024, a particular attention will be given to the students of the EUMaster4HPC and to the R&I projects of the JU.

The Summit will be an important moment to showcase the latest achievements and opportunities in the European supercomputing ecosystem, and to discuss and reflect on the current and future challenges in HPC, quantum computing and AI. The event will provide also a great opportunity for attendees to network and connect with the European HPC, quantum and AI communities.

- **EuroHPC Summit 2026**

The EuroHPC Summit 2026 will be organised, during the Cypriot EU Presidency. A budget of EUR 700,000 will be allocated from DEP operational activities, to be committed already in 2025.

- **User Day 2025**

Following the successful User Day event organised in 2023 and 2024, User Day 2025 will be organised on 30/09/25 and 01/10/25 in Denmark in order to disseminate results of projects that have had access to EuroHPC JU systems. A budget of EUR 200,000 will be allocated from DEP operational activities.

- **Other Conferences in 2025**

  - **ISC High Performance 2025**

The EuroHPC JU will participate again in the event ISC 2025 as exhibitor. It will also support the ISC organisers to promote TOP 500 list communication activities. In 2025, the event will take place on 10-13 June 2025 in Hamburg, Germany. ISC is the largest forum in Europe for high performance computing, high performance data analytics and AI/machine learning and brings together vendors, public institutions, and startups. It is also one of the two moments in the year where the TOP 500 and Top Green 500 ranking lists to benchmark HPC systems are communicated to the HPC community.

The event is a great opportunity for the EuroHPC JU to showcase its opportunities, its supercomputers and R&I projects. ISC 2025 is also critical for the JU to consolidate its public image while increasing its network and its European user's base. A budget of EUR 200,000 is allocated from the Administrative budget.

  - **Supercomputing Conference (SC25)**

The JU aims to promote its activities and achievements at SC25, the largest annual international HPC fora. SC25 will take place in Saint-Louis, United States in November 2025. A budget of EUR 150,000 is allocated from the Administrative budget.

Other Communication activities

In addition, the EuroHPC JU will also ensure the following activities:

- Regular in-person meetings between key EuroHPC stakeholders (GB, RIAG, INFRAG, User Forum Coordination Group (UFCG), User Forum, EuroHPC Users, the Hosting Entities, R&I partners) to ensure efficient and coordinated collaboration, develop synergies and reach potential new EuroHPC users
- Inauguration of new EuroHPC supercomputers and Quantum Computers
- Inauguration of 'AI Factories'
- Interactive publications of JU reports such as the Annual Activity Report, the User Day Report, to improve the attractiveness of the documents.

Legal and Internal Control

The JU is dependent on excellent legal support in order to do its work. It will procure, where necessary, external legal counsel to support it in implementing its operational activities. Furthermore, Internal Control activities remain a priority.

IT and Office activities

EuroHPC JU will continue to benefit from the shared IT services, provided on the basis of the Framework Contract signed between the Joint Undertakings and the framework contractor. The JU will also cooperate with the network

of JUs in sharing expertise between IT JU professionals in the context of the back-office arrangement, mainly in the following areas: Inter-JU IT governance, Management of ICT tools, services and contracts EC applications, tools and services, EC FWCs Other tools and services (TBC), and Security and compliance management.

Following the entry into force of the Cybersecurity Regulation, laying down measures for a high common level of cybersecurity at the institutions, bodies, offices and agencies of the Union, which entered into force on 7 January 2024, the JU will take measures in collaboration with other JUs, to comply with the requirements imposed by the regulation.

The JU will also work towards optimising the office space to make sure it caters for the needs of a fully staffed JU.

Finance, audit and budgetary discharge

The 2025 budget structure remains unchanged, compared to the existing structure previously approved by the Governing Board.

In addition, the JU remains regularly audited by the European Court of Auditors and by the Internal Audit Service (IAS). In 2025, the IAS will continue the audit, which started in 2024, on grants and procurement management.

During 2025, ex-post financial audits of grant beneficiaries will continue to be organised, along the guidelines of the various programmes the JU is implementing.

BUDGET 2025

1. Revenue

The 2025 budget presented below includes revenues allocated under Horizon 2020 and the Multi-Annual Programmes 2021-2027 which are Digital Europe Programme, Horizon Europe and Connected Europe Facility.

The revenue commitment appropriations include new 2025 budget credits for a total amount of EUR 737 Million including EUR 375 Million of Participating States contributions. In addition, it is proposed to reactivate budget credits from past years in 2025 for a total amount of EUR 305 Million EUR. The total revenue budget of the JU in 2025 is EUR 1 042 Million.

Table 1 Revenue Commitment Appropriations

REVENUE (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	2025 Last Approved Budget (C1 + C2 credits)
1. Fees and Charges			
2. EU Contribution with EFTA included	623,398,655	277,516,230	667,257,168
of which Regulation (EU) 2021/1173 Administrative (Title 1 and Title 2)	3,447,160	8,092,878	10,496,000
of which old Regulation (EU) 2018/1488 Administrative (Title 1 and Title 2)	2,279,982	1,280,000	-
of which Regulation (EU) 2021/1173 Operations (Title 3)	617,652,201	268,129,663	656,661,168
of which old Regulation (EU) 2018/1488 Operations (Title 3)	19,312	13,688	100,000
3. Third Country Contribution	-	-	-
4. Other Contributions	270,850,000	30,245,228	375,309,162
4.1 Participating States	270,850,000	30,000,000	375,309,162
Contribution to the procurement MN5, Leonardo & Lumi	-	-	
PT contribution to procurement of petascale	-	-	
Contribution to the call of the high-end (exascale) supercomputers	270,850,000		
Contribution to the call of the quantum computers		30,000,000	
Contribution to the call of the upgrading of the supercomputers			18,309,162
Contribution to the call of the AI-optimised or upgraded supercomputer			357,000,000
4.2 Private Members	-	-	
4.3 Miscellaneous Revenues	-	245,228	-
of which Administrative (Title 1 and Title 2)	-	235,000	
of which Regulation (EU) 2021/1173 Operations (Title 3)	-		
of which old Regulation (EU) 2018/1488 Operations (Title 3)		10,228	
Total REVENUE	894,248,655	307,761,458	1,042,566,330

Table 2 Revenue Payment Appropriations

REVENUE (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	2025 Last Approved Budget (C1 + C2 credits)
1. Fees and Charges			
2. EU Contribution with EFTA included	157,429,603	566,961,110	564,839,573
of which Regulation (EU) 2021/1173 Administrative (Title 1 and Title 2)	3,447,160	8,092,878	10,396,000
of which old Regulation (EU) 2018/1488 Administrative (Title 1 and Title 2)	1,965,743	2,035,108	-
of which Regulation (EU) 2021/1173 Operations (Title 3)	60,262,383	456,344,323	503,692,151
of which old Regulation (EU) 2018/1488 Operations (Title 3)	91,754,318	100,488,802	50,751,422
3. Third Country Contribution		-	-
4. Other Contributions	48,407,346	152,385,387	197,900,695
4.1 Participating States	48,407,346	152,140,159	197,900,695
Contribution to the procurement MN5, Leonardo & Lumi	9,529,627	79,176,821	22,546,065
PT contribution to procurement of petascale	2,240,734	1,791,701	-
Contribution to the call of the high-end (exascale) supercomputers	36,636,985	37,130,136	121,785,068
Contribution to the call of the upgrading of the supercomputers			18,309,162
Contribution to the call of the quantum computers		34,041,500	35,260,400
4.2 Private Members	-		
4.3 Miscellaneous Revenues	-	245,228	-
of which Administrative (Title 1 and Title 2)	-	235,000	
of which Regulation (EU) 2021/1173 Operations (Title 3)	-		
of which old Regulation (EU) 2018/1488 Operations (Title 3)	-	10,228	
Total REVENUE	205,836,949	719,346,498	762,740,268

2. Expenditure

The overall administrative budget for 2025 remains aligned with the maximum ceiling foreseen under the JU regulation of EUR 92 Million for the entire 2021-2027 current Multi-Annual Financial Framework.

Table 3 Expenditure Commitment Appropriations

EXPENDITURES (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	2025 Last Approved Budget (C1 + C2 credits)
Title 1. Staff Expenditure	**4,278,053**	**6,069,752**	**7,864,480**
11 Salaries & Allowances	**3,728,086**	**5,253,704**	**6,970,480**
1100 - Temporary Agents	2,305,544	3,692,857	4,280,480
1110 - Contractual Agents	1,422,541	1,419,432	2,400,000
1120 - Interim, Trainees & SNEs		141,415	290,000
12 Expenditure relating to recruitment	**25,718**	**20,574**	**23,000**
13 Missions and travel expenses	**201,695**	**362,000**	**300,000**
14 Socio-medical and training	**322,554**	**237,273**	**361,000**
1400 - CAS & EU School transports		87,440	130,000
1410 - Trainings		89,075	150,000
1420 - Social measures for Staff		60,758	81,000
1500 - HR administrative services		**196,200**	**210,000**
Title 2. Building, Equipment and Operating Costs	**1,449,089**	**3,435,127**	**2,631,520**
20 Buildings and associated costs	**93,901**	**70,000**	**100,000**
21 Information Technology	**333,344**	**526,351**	**570,000**
22 Movable property	**2,549**	**32,192**	**40,000**
23 Current administrative expenditure	**120,051**	**155,540**	**205,000**
24 External consultancy & auditing	**5,201**	**382,906**	**100,000**
25 Internal Meetings	**71,122**	**74,825**	**50,000**
26 Legal services	**306,986**	**424,782**	**50,000**
27 Comm, Information & Events	**90,250**	**232,096**	**485,300**
28 Experts and associated costs	**425,684**	**1,536,434**	**1,031,220**
Total ADMIN (Tilte I and II)	**5,727,142**	**9,504,879**	**10,496,000**

EXPENDITURES (EUR)	Executed Budget 2023 (C1+C2 credits)	Current Budget 2024 (C1+C2 credits)	2025 Last Approved Budget (C1 + C2 credits)
Total ADMIN (Tilte I and II)	**5,727,142**	**9,504,879**	**10,496,000**
Title 3. Operational Expenditure			
30 Grants, HPC Operations, R&I Activities	**225,019,312**	**210,104,866**	**258,771,459**
Regulation (EU) 2018/1488 Calls	**19,312**	**126,917**	**100,000**
EuroHPC-2019-1	19,312	126,917	100,000
EuroHPC-2019-2	-	-	-
EuroHPC-2019-3	-	-	-
EuroHPC-2020 -1	-	-	-
EuroHPC-2020 -2	-	-	-
EuroHPC-2020 -3	-	-	-
Opex Grants	-	-	-
Regulation (EU) 2021/1173 Calls	**225,000,000**	**209,977,949**	**258,671,459**
c. Federation Pillar		-	-
d. Technologies Pillar	185,000,000	88,677,949	8,000,000
e. Applications Pillar	30,000,000	36,300,000	20,000,000
f. Compentences & Skills Pillar		15,000,000	-
g. International Cooperation Pillar	10,000,000	10,000,000	5,500,000
h. AI pillar		60,000,000	225,171,459
31 HPC Infrastructure Activities	**663,502,201**	**88,151,714**	**773,298,871**
Regulation (EU) 2018/1488	-	-	-
LUMI - PreExscale		-	-
LEONARDO - PreExscale		-	-
MNS5 - PreExscale		-	-
Deucalion - Petascale		-	-
Regulation (EU) 2021/1173	**663,502,201**	**88,151,714**	**773,298,871**
AI-optimised or upgraded EuroHPC supercomputers (TCO)			754,089,709
High-end (Exascale) supercomputers (TCO)	541,700,000	-	-
Mid-range supercompters (TCO)	64,597,000	-	-
Hyperconnectivity for HPC Resources call & Federation Call	-	-	-
Upgrading EuroHPC supercomputers (TCO)	-	-	18,309,162
Quantum computers	20,000,000		-
Access and allocation of EuroHPC computing resources and services	120,000	1,800,000	-
Industrial HPC supercomputer	12,260,601		-
EuroHPC Summits	719,304	700,000	700,000
User Forum Events	60,800	-	200,000
De-prioritised calls from previous years	24,044,496	85,651,714	-
Total OPERATIONAL (Title III)	**888,521,513**	**298,256,580**	**1,032,070,330**
Total EXPENDITURE	**894,248,655**	**307,761,458**	**1,042,566,330**

Table

4 Expenditure Payment Appropriations

EXPENDITURES (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	2025 Last Approved Budget (C1 + C2 credits)
Title 1. Staff Expenditure	**4,055,875**	**6,319,540**	**7,864,480**
11 Salaries & Allowances	**3,664,102**	**5,284,839**	**6,970,480**
1100 - Temparary Agents	2,305,544	3,692,857	4,280,480
1110 - Contractual Agents	1,358,558	1,450,567	2,400,000
1120 - Interim, Trainees & SNEs		141,415	290,000
12 Expenditure relating to recruitment	**16,646**	**20,574**	**23,000**
13 Missions and travel expenses	**180,581**	**413,159**	**300,000**
14 Socio-medical and training	**194,546**	**237,273**	**361,000**
1400 - CAS & EU School transports		87,440	130,000
1410 - Trainings		89,075	150,000
1420 - Social measures for Staff		60,758	81,000
15 - HR administrative services		**363,694**	**210,000**
Title 2. Building, Equipment and Operating Costs	**1,357,028**	**3,940,446**	**2,531,520**
20 Buildings and associated costs	**83,851**	**81,055**	**100,000**
21 Information Technology	**380,922**	**549,252**	**520,000**
22 Movable property	**2,549**	**32,192**	**40,000**
23 Current administrative expenditure	**109,675**	**196,098**	**155,000**
24 External consultancy & auditing	**5,919**	**388,182**	**100,000**
25 Internal Meetings	**53,988**	**95,279**	**50,000**
26 Legal services	**192,004**	**619,117**	**50,000**
27 Comm, Information & Events	**35,000**	**226,096**	**485,300**
28 Experts and associated costs	**493,119**	**1,753,174**	**1,031,220**
Total ADMIN (Tilte I and II)	**5,412,903**	**10,259,987**	**10,396,000**

EXPENDITURES (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	2025 Last Approved Budget (C1 + C2 credits)
Total ADMIN (Tilte I and II)	**5,412,903**	**10,259,987**	**10,396,000**
Title 3. Operational Expenditure			
30 Grants, HPC Operations, R&I Activities	**29,706,292**	**353,986,587**	**292,817,175**
Regulation (EU) 2018/1488 Calls	**19,908,134**	**55,669,252**	**46,443,090**
EuroHPC-2019-1	5,015,453	5,941,249	2,377,324
EuroHPC-2019-2		3,993,504	-
EuroHPC-2019-3		515,000	-
EuroHPC-2020 -1	3,129,855	9,239,771	8,797,497
EuroHPC-2020 -2	4,164,937	9,033,956	11,889,812
EuroHPC-2020 -3		10,419,282	1,004,213
Opex Grants	7,597,889	16,526,489	22,374,245
Regulation (EU) 2021/1173 Calls	**9,798,157**	**298,317,335**	**246,374,084**
c. Federation Pillar		4,000,000	783,333
d. Technology Pillar		171,028,014	40,736,311
e. Applications Pillar	8,798,273	58,500,673	9,871,398
f. Compentences & Skills Pillar	999,884	48,788,648	13,701,425
g. International Cooperation Pillar		16,000,000	4,499,618
h. AI Pillar			176,781,999
31 HPC Infrastructure Activities	**170,717,754**	**355,099,924**	**459,527,094**
Regulation (EU) 2018/1488	**83,616,544**	**125,901,300**	**26,854,397**
LUMI - PreExscale	68,510,638	4,433,829	8,125,010
LEONARDO - PreExscale	11,067,434	17,487,903	1,843,760
MN5 - PreExscale Supercomputer	1,797,739	102,187,868	16,885,627
Deucalion & Meluxina - Petascale	2,240,734	1,791,701	-
Regulation (EU) 2021/1173	**87,101,210**	**229,198,624**	**432,672,697**
AI-optimised or upgraded EuroHPC supercomputers (TCO)			60,000,000
High-end (Exascale) supercomputers (TCO)	86,636,985	133,219,302	261,576,279
Mid-range supercompters (TCO)		-	9,048,281
Hyperconnectivity for HPC Resources call & Federation Call		10,775,084	28,000,000
Upgrading EuroHPC supercomputers (TCO)		4,153,875	26,997,947
Quantum computers		55,641,500	45,480,441
Access and allocation of EuroHPC computing resources and services		1,000,000	669,750
Industrial HPC supercomputer		3,400,000	-
EuroHPC Summits	464,225	700,000	700,000
User Forum Events			200,000
De-prioritised calls from previous years		20,308,863	
Total OPERATIONAL (Title III)	**200,424,046**	**709,086,511**	**752,344,268**
Total EXPENDITURE	**205,836,949**	**719,346,498**	**762,740,268**

Tables 5a and 5b Cash Flow Operational Budget – Title III – EuroHPC grants (Chapter 30)

Table 5a – Cashflow overview Chapter 30 under DEP, HE and CEF

Item	Type of payment*	Funding Programme	C1 Credits (EUR)	C2 Credits (EUR)	Total C1 + C2 Credits (EUR)
c. Federation Pillar			-	783,333	783,333
DIGITAL-EUROHPC-JU-2022-APPSUPPORT-01	PP	DEP		783,333	783,333
d. Technology Pillar			-	40,736,311	40,736,311
HORIZON-EUROHPC-JU-2024-DARE-SGA-04	PP	HE		27,273,351	27,273,351
HORIZON-EUROHPC-JU-2023-ENERGY-04		HE		13,462,960	13,462,960
e. Applications Pillar			-	9,871,398	9,871,398
HORIZON-EUROHPC-JU-2022-ALG-03	PP/IP	HE		500,000	500,000
HORIZON-EUROHPC-JU-2021-COE-01		HE		626,260	626,260
HORIZON-EUROHPC-JU-2023-COE-01		HE		196,989	196,989
HORIZON-EUROHPC-JU-2023-COE-01-01		HE		599,784	599,784
HORIZON-EUROHPC-JU-2023-QEC-05-01		HE		7,948,365	7,948,365
f. Compentences & Skills Pillar			-	13,701,425	13,701,425
DIGITAL - EUROHPC-JU-2022-TRAINING-02	PP/IP	DEP		499,942	499,942
DIGITAL - EUROHPC-JU-2022-TRAINING-03		DEP		2,500,000	2,500,000
DIGITAL -EUROHPC-JU-2023-SME-01		DEP		1,999,979	1,999,979
DIGITAL-EUROHPC-JU-2022-NCC-01		DEP		4,466,739	4,466,739
DIGITAL-EUROHPC-JU-2023-ACADEMY-02		DEP		2,999,962	2,999,962
DIGITAL-EUROHPC-JU-2024-NCC-02		DEP		1,234,803	1,234,803
g. International Cooperation Pillar			-	4,499,618	4,499,618
HORIZON - EUROHPC-JU-2022-INCO-05	PP/IP	HE		500,000	500,000
HORIZON-EUROHPC-JU-2023-INCO-06		HE		3,999,618	3,999,618
h. AI Pillar			-	176,781,999	176,781,999
AI factories Soverign Cloud	PP/IP	CEF		23,200,000	23,200,000
AI Experimental Platform		HE		28,511,949	28,511,949
AI Factory services (including AI Antenna Call)		HE		125,070,050	125,070,050
Regulation (EU) 2021/1173 Total PA			-	246,374,084	246,374,084

* FP - Final Payments, IP - Interim Payments, PP - Pre-financing

Table 5b – Cashflow overview Chapter 30 (Grants) under Horizon2020

Item	Type of payment*	C1 Credits (EUR)	C2 Credits (EUR)	Total C1 + C2 Credits (EUR)
ACROSS	IP/FP		399,912	399,912
ADMIRE			398,164	398,164
DEEP-SEA			753,474	753,474
DComEX			135,938	135,938
eProcessor			199,999	199,999
EXAFOAM			240,180	240,180
LIGATE			260,986	260,986
MICROCARD			277,705	277,705
SPARCITY			130,274	130,274
TEXTAROSSA			205,138	205,138
TIME-X			151,213	151,213
Estimated Recoveries from unspent expenses			-875,659	-875,659
EuroHPC-2019-1		0	2,277,324	2,277,324
Late interest payments PA available			100,000	100,000
Total late interest		0	100,000	100,000
LUMI - OPEX	IP/FP	6,000,000	607,533	6,607,533
LEONARDO - OPEX		6,000,000	4,396,822	10,396,822
MN5 - OPEX		4,000,000	1,369,890	5,369,890
Opex Grants		16,000,000	6,374,245	22,374,245
Eupex_EuroHPC-2020-01a	IP/FP		5,465,472	5,465,472
The European Pilot_EuroHPC-2020-01a			2,583,602	2,583,602
HPCQS_EuroHPC-2020-01b			748,423	748,423
H2020-JTI-EuroHPC-2020-01		0	8,797,497	8,797,497
EPI EuroHPC-2020-02	IP/FP		11,889,812	11,889,812
H2020-JTI-EuroHPC-2020-02		0	11,889,812	11,889,812
EU Masters4HPC_EuroHPC-2020-03	IP/FP		1,004,213	1,004,213
H2020-JTI-EuroHPC-2020-03		0	1,004,213	1,004,213
Regulation (EU) 2018/1488 Total PA (H2020)		16,000,000	30,443,090	46,443,090

* FP - Final Payments, IP - Interim Payments, PP - Pre-financing

Tables 5c and 5d Cash Flow Operational Budget – Title III – EuroHPC Infrastructure activities (Chapter 31)

Table 5c – Cashflow overview Chapter 31 under DEP, HE and CEF

Item	Type of payment *	Funding	Type of Procurement **	C1 Credits (EUR)		C2 Credits (EUR)	
				EU	PS***	EU	PS
b. Infrastructure Pillar				0	104,748,062	229,318,067	70,606,568
High-end / Exascale supercomputers				0	53,220,000	139,791,211	68,565,068
EUROHPC-2021 -CEI-EXA-01 - TCO	PP/IP	DEP	EHPC			55,202,053	68,565,068
EUROHPC-2022 -CEI-EXA-01 - TCO	PP/IP	DEP	EHPC		53,220,000	84,589,158	
AI PILLAR				0	0	60,000,000	0
AI PILLAR - TCO	PP/IP	DEP	EHPC			60,000,000	
Midrange supercomputers				0	0	9,048,281	0
EUROHPC-2021-CEI-MR-01 - TCO	PP/IP	DEP	JOINT			1,851,581	
EUROHPC-2022-CEI-MR-01- TCO	PP/IP	DEP	JOINT			7,196,700	
Upgrading EuroHPC supercomputers				0	18,309,162	8,688,785	0
EUROHPC-2022-CEI-UPG-01 - CAPEX	PP/IP	DEP	EHPC		18,309,162	7,869,785	
EUROHPC-2022-CEI-UPG-01 - OPEX	PP/IP	DEP	EHPC			819,000	
Quantum computers				0	33,218,900	10,220,041	2,041,500
EUROHPC-2022-CEI-QC-01 - CAPEX	PP/IP	DEP	EHPC				
EuroQCS Poland	PP/IP	DEP	EHPC		4,989,500	1,995,800	
LUMI-Q Czech Republic	PP/IP	DEP	EHPC		458,400	379,100	2,041,500
EuroQCS France	PP/IP	DEP	EHPC		3,301,000	1,320,400	
Euro-Q-EXA Germany	PP/IP	DEP	EHPC		15,000,000		
EuroQCS Italy	PP/IP	DEP	EHPC		6,495,000	150,000	
EuroQCS Spain	PP/IP	DEP	EHPC		2,975,000	1,375,800	
DIGITAL-EUROHPC-JU-2022-HPCQC-04-IBA	PP/IP	DEP	EHPC			3,668,441	
EUROHPC-2022-CEI-QC-01 - OPEX	PP/IP	DEP	EHPC			1,330,499	
EUROHPC-2023-CEI-QC-01 - TCO	PP/IP	DEP	EHPC				
Other Activities				0	0	1,569,750	0
ACCESS IT PLATFORM PROJECT	PP/IP	DEP	EHPC			669,750	
EUROHPC SUMMIT 2025	PP/IP	DEP	EHPC			700,000	
EUROHPC USER DAY 2025	PP/IP	DEP	EHPC			200,000	
c. Federation Pillar				0	0	28,000,000	-
HYPERCONNECTIVITY FOR HPC RESOURCES CALL	PP/IP	CEF2	EHPC			22,000,000	
EUROHPC FEDERATION PLATFORM EUROHPC/2023/CD/0003/LC-03662828	PP/IP	CEF2	EHPC			6,000,000	
Regulation (EU) 2021/1173 Total PA				-	104,748,062	257,318,067	70,606,568

* FP - Final Payments, IP - Interim Payments, PP - Pre-financing

** Joint Procurement : Participation States contributions is managed by NFA, not entered in EuroHPC budget

*** Participating States contributions entered in EuroHPC Budget

Table 5d – Cashflow overview Chapter 31 under Horizon2020

Item	Type of payment*	C1 Credits (EUR)		C2 Credits (EUR)	
		EU	PS	EU	PS
LUMI - PreExscale	IP/FP		2,183,617	3,386,452	2,554,941
LEONARDO - PreExscale	IP/FP		921,880	921,880	
MN5 - PreExscale	IP/FP		16,885,627		
Regulation (EU) 2018/1488 Total PA		0	19,991,124	4,308,332	2,554,941

* FP - Final Payments, IP - Interim Payments, PP - Pre-financing

3. Budget structure and details

a) Title 1: Staff Expenditure

Chapter 11 – Salaries and Allowances

This chapter covers the expenditure for salaries, social security, pension contributions and other related allowances of staff. It covers the remuneration cost of establishment plan posts (temporary staff) and external personnel (contract staff, Seconded National Experts, interim agents and trainees), in accordance with the Staff Regulations.

Chapter 12 – Expenditure relating to recruitment

This chapter covers the expenditure regarding the recruitment process of new staff and the associated administrative costs.

Chapter 13 – Mission and travel expenses

This chapter covers travel agency fees and the reimbursements of costs of staff having to go on mission / travel for business. It covers travel expenses, daily subsistence allowances and ancillary or exceptional expenditure incurred by staff, whilst on mission, in the interest of the service. As part of its duties the JU staff will have to travel to various conferences, meetings and workshops related to the activities of the Joint Undertaking and to the actions funded.

Chapter 14 – Socio-medical expenditure and professional development

This chapter covers the JU contribution to the costs of the Comité des Activités Sociales, (e.g. the "crèche", the "garderie/centre d'études", the school bus), the medical service, the policy linked to financial assistance to disabled persons, the complementary health insurance, contribution of the home office (as per European Commission guidelines), and other related activities. It also covers the cost for professional development, training programmes and HR related events.

Chapter 15 – HR administrative services

This chapter covers costs of all SLAs and working arrangements with other EU bodies for HR matters, together with specialised external HR legal costs, when required.

b) Title 2: Building, Equipment and Operating Costs

Chapter 20 – Building and associated costs

This Chapter covers costs related to the infrastructure including e.g. office overheads and insurance, cleaning and maintenance, security and surveillance (where not covered by the SLA with DG HR) and others. The office premises are provided by the JU hosting country.

Chapter 21 – Information Technology

This Chapter covers costs related to the purchase of computer equipment, video conference equipment, the cost of software and also software package maintenance, user support, and others. It includes the procurement and maintenance of programme packages and software licenses necessary for the effective operation of the JU, the expenditure on services contracts for analysis, programming and technical assistance necessary for the JU, the cost of external services contracts to manage and maintain the data and systems, training and other support activities.

Chapter 22 – Movable property and associated costs

This Chapter covers the necessary resources to cover the costs of the organisation of the office e.g. office furniture needs.

Chapter 23 – Current administrative expenditure

This Chapter covers the costs of miscellaneous services related to the agreements signed with other Commission offices/services e.g. the CdT (translations) DG BUDG (ABAC, SUMMA & treasury), BOA for Accounting Services, S.G. (HAN), EFSA (EUAN SSO), and others.

It also covers of office supplies, stationery, badges, office material and other consumables necessary for the operation of the office. It also includes all correspondence, postage, delivery services costs and telecommunication costs (fixed, mobile telephony).

Chapter 24 – External administrative consultancy and auditing

This chapter covers the costs for external audit, external consultancies linked to administrative matters & outsourced support.

Chapter 25 – Internal meetings

This Chapter covers any expenditure linked to formal and internal events and meetings. It covers necessary catering costs and any additional costs regarding the organisation.

Chapter 26 – Legal services

This Chapter covers the costs for legal assistance, data protection and other legal obligations.

Chapter 27 – Communication, Information & Events

This Chapter covers the costs regarding Communication activities, events organization, dissemination and publication activities in connection with operational activities. It will also cover the costs of internal communication expenses.

Chapter 28 – Experts and associated costs

This Chapter covers the fees for the work done by experts, travel expenses and daily allowances if applicable. It also includes the reimbursement of expenses (travel and accommodation) for experts invited by the Euro HPC to meetings/events. (e.g. INFRAG/RIAG members and other experts).

c) Title 3: Operational Expenditure

The main purpose of the Joint Undertaking is the indirect implementation of EU budget in the field of High-Performance Computing. Detailed description of the operational activities undertaken in 2021 are presented in the Work Programme below.

Chapter 30 – Grants, R&I Activities

In 2024, this appropriation related to all expenses linked to the EuroHPC JU R&I activities.

Table 5a above sets out contributions made to HPC R&I activities established under Regulation 2018/1488 and Regulation 2021/1173.

Chapter 31 – HPC Infrastructure Activities

In 2024, this appropriation relates to the ongoing procurement in exascale, the mid-range systems, the quantum systems and upgrades and the industrial supercomputers.

Supercomputer maintenance is also foreseen to be paid annually from 2022.

HUMAN RESOURCES

In 2025, the JU should be fully staffed (with only standard turnover rates), and the last pending selection procedures should be finalised.

In 2024, the JU finalised its HR strategy, focusing on 7 pillars (talent selection, professional growth, collaboration, efficiency, leadership development, employee wellbeing and safe & respectful workplace. The HR Strategy included an action plan, which will continue to be implemented in 2025.

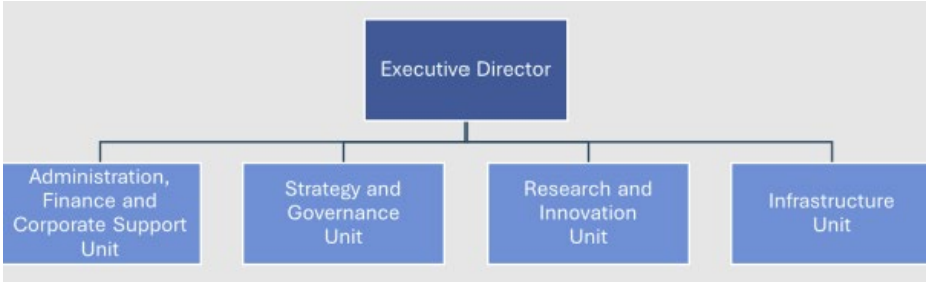
Following the Staff Engagement Survey carried out in 2024, follow-up actions will be discussed and carried out during 2025.

Internal communication will be further strengthened in the area of Human Resources, in particular by means of continuous development of the intranet pages and dedicated info sessions.

The JU will continue to participate in the working groups in the context of the Shared Back-Office Arrangement (BOA) in the area of HR, as well as other relevant working groups at the level of EUAN (EU Agencies network) or via other platforms.

Official organigramme of the JU

The organigramme below presents the current organisational structure of the JU, up to the Head of Unit level**.**



Priorities for the 2025 recruitments

All remaining vacant posts should be filled in the course of 2025.

Human resources planning for the period of 2021-2027

	2021	2022	2023	2024	2025	2026	2027
Establishment plan posts Temporary Agents (TA)	4	22	27	27	27	27	27
Contract Agents (CA)	11	25	27	27	28*	28*	28*
Seconded National Experts (SNE)	1	0	0	0	0	0	0
Total Staff	**16**	**47**	**54**	**54**	**55***	**55***	**55***

The increase of the budget delegated to the JUs, related to the participation of third countries in Horizon Europe, which translates into an increase of 1 additional FTE allocated to EuroHPC JU until the end of the current MFF.

Breakdown of Temporary Staff by grade in 2024 and 2025

Temporary Agents (TA) by grade	2024 TA posts	Filled-in posts as of 31/12/2024	2025 TA posts
AD 16			
AD 15			1
AD 14	1	1	
AD 13			
AD 12	1	1	1
AD 11	1	1	1
AD 10	1	0	1
AD 9	2	2	4
AD 8	10	6*	6
AD 7	4	8	7
AD 6	5	3	4
AD 5			
Total (ADs)	**25**	**22**	**25**
AST 4	2	2	2
Total (ASTs)	**2**	**2**	**2**
Total TA	**27**	**24**	**27**

* depending on the final outcome of the 2024 reclassification exercise

Breakdown of external staff by Function Group in 2024 and 2025

The JU remains within the planned maximum full-time equivalents (FTEs) in terms of contract agents, as foreseen in the Legislative Financial Statement (LFS) - 27, with the addition of 1 FTE allocated to EuroHPC JU until the end of the current MFF, in relation to the increase of the budget delegated to the JUs in the context of the participation of third countries in Horizon Europe, thus 28 FTEs in total. Moreover, the last remaining contract agent group II position is being phased out in 2025.

Contract Agents (CA) Staff	**2024 approved FTEs**	**Filled-in posts as of 31/12/2024**	**2025 approved FTEs**
Function Group IV	22	10	24
Function Group III	4	5	4
Function Group II	1	1	0
Total CA staff	**27**	**16**	**28**

ANNEX: WORK PROGRAMME 2024 - CALLS TO LAUNCH IN 2025 AND 2026

Action		Funding Rate	EU	Total	Status
Enhancing competitive European microprocessor technology for HPC	HE	EU 50% PS 50%	48.6 Million	97.3 Million	2025
Enabling Universal Access and Integration of Quantum Resources	HE	EU 50% PS 50%	10 Million	20 Million	2025
HPC/QC Middleware technologies	HE	EU 50% PS 50%	20 Million	40 Million	2025
Quantum application prizes	HE	EU 100%	300,000	300,000	2026
Development of new benchmarks for HPC, Quantum Computing, and AI	HE	EU50% PS 50%	2.5 Million	5 Million	2025
HPC for AI Software Ecosystem	HE	EU50% PS 50%	8 Million	16 Million	2025
Centres of Excellence	HE	EU50% PS 50%	10 Million	20 Million	2025
HPC Applications	HE	EU50% PS 50%	10 Million	20 Million	2025
Continuous integration and deployment platform (CI/CD)	DEP	EU50% PS 50%	5 Million	10 Million	2025