

# EuroHPC JOINT UNDERTAKING DECISION OF THE GOVERNING BOARD OF THE EuroHPC JOINT UNDERTAKING No 01/2025 Amending the Joint Undertaking's Work Programme and Budget for the year 2025 (Amendment No 1)

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<sup>1</sup>, (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<sup>2</sup>,

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<sup>3</sup>,

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,

# WHEREAS

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

<sup>&</sup>lt;sup>1</sup> OJ L 256, 19.7.2021, p. 3–51

<sup>&</sup>lt;sup>2</sup> OJ L, 19.6.2024, p. 1-5.

<sup>&</sup>lt;sup>3</sup> 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.

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# • A call on EuroHPC International Cooperation (HORIZON-JU-EUROHPC-2025-INCO-01),

- (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 5 February 2025

For the Governing Board Rafal Duczmal The Chair

Annex: WP25 Amendment No 1



# 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<sup>4</sup> 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<sup>5</sup>. In line with the Commission Recommendation on the cybersecurity of 5G networks of 2019<sup>6</sup> and the subsequent report on EU coordinated risk assessment of the cybersecurity of 5G networks of 2019<sup>7</sup>,

<sup>&</sup>lt;sup>4</sup> For <u>conditions</u> see the <u>STEP Regulation</u>

<sup>&</sup>lt;sup>5</sup> 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.

<sup>&</sup>lt;sup>6</sup> Commission Recommendation (EU) 2019/534 of 26 March 2019 Cybersecurity of 5G networks, L 88/42.

<sup>&</sup>lt;sup>7</sup> NIS Cooperation Group, Report on EU coordinated risk assessment of the cybersecurity of 5G networks, 9 October 2019.

the EU Toolbox on 5G cybersecurity<sup>8</sup>, the second report on Member States' progress in implementing the EU toolbox on 5G cybersecurity of 2023<sup>9</sup>, and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023<sup>10</sup>, the Commission together with the Member States has worked to jointly identify and assess cyberthreats and security risks for 5G networks<sup>11</sup>. 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<sup>12</sup> and the related Communication on the implementation of the 5G cybersecurity toolbox of 2023<sup>13</sup>.

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":

 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:

- o 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);

<sup>&</sup>lt;sup>8</sup> NIS Cooperation Group, EU Toolbox on 5G Cybersecurity, 29 January 2020.

<sup>&</sup>lt;sup>9</sup> NIS Cooperation Group, Second report on Member States' progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023.

<sup>&</sup>lt;sup>10</sup> Communication from the Commission: Implementation of the 5g cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final.

<sup>&</sup>lt;sup>11</sup> Within the NIS framework NIS 1 + 2 [Directive - 2022/2555 - EN - EUR-Lex (europa.eu)]

<sup>&</sup>lt;sup>12</sup> NIS Cooperation Group, Second report on Member States' progress in implementing the EU Toolbox on 5G Cybersecurity, June 2023.

<sup>&</sup>lt;sup>13</sup> Communication from the Commission: Implementation of the 5G cybersecurity Toolbox, Brussels, 15.6.2023 C(2023) 4049 final

- 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).
- o (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.
- 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	<u>Programme</u>	Type of action/ Funding rate	EU Contribution (EUR)	<u>Total</u> Budget (EUR
AI Factories	Procurements: Al- optimised and upgraded EuroHPC supercomputers	DEP	EU 50% PS 50%	357 Million	714 Million
	AI Factory Grant	HE	EU 50% PS 50%	120 Million	240 Million
	Networking of Al Factories	HE	EU 100%	6 Million	6 Million
	Al 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 (a total of 119 Million over a three- year period starting in 2025)
Technology	Quantum Enhanced ML	Horizon Europe	EU 50% PS 50%	8 Million	16 Million

	Post-exascale	Horizon	EU 50%	20 Million	40 Million
	computing	Europe	20 30%	20 101111011	40 101111011
	computing	Luiope	PS 50%		
Applications	Centres of Excellence	Horizon	EU 50%	20 Million	40 Million
		Europe	PS 50%		
	Workflows and	Horizon	EU 50%	20 Million	40 Million
	Services for new Computing Environments	Europe (2026)	PS 50%	(budget to be committed in 2026)	
	Code reengineering	Horizon	EU 50%	20 Million	40 Million
	in new HPC/AI environments - HPC for AI/AI for HPC	Europe (2026)	PS 50%	(budget to be committed in 2026)	
Competences and	National	DEP (2026)	EU 50%	35 Million	70 Million
Skills	Competence Centres		PS 50%		
	CSA NCC Coordination	DEP (2026)	EU 100%	2 Million	2 Million
	EuroHPC Summit 2026	DEP	100%	700K	700K
	User Day 2025	DEP	100%	200К	200K
International	CSA Collaboration with third countries on AI Factories and HPC/AI (TPC)	Horizon Europe	100%	1.5 Million	1.5 Million
	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 2024-5<sup>th</sup> amendment) to select

- 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 31<sup>st</sup> 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 714 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 357 Million committed in 2025 matched by a PS contribution of EUR 357 Million.

In 2025, the Union financial contribution (Horizon Europe) of EUR 120 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

Al 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

#### **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 Unionwide, 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.

#### <u>Scope</u>

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).

In 2026, an additional EU contribution from the Horizon Europe Programme of EUR 20 Million (50% of total funding) could be matched by a PS contribution of EUR 40 Million (50% of total funding).

#### Calls in 2025:

#### 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<sup>14</sup>

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) <sup>15</sup>	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	<mark>1.50</mark>	<mark>0.5 to 1.50</mark>	1		
Overall indicative budget		<mark>1.50</mark>				

General conditions relating to this call

<sup>&</sup>lt;sup>14</sup> Trillion Parameter Consortium (TPC).

<sup>&</sup>lt;sup>15</sup> 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)<sup>14.</sup> 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):

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	<ul> <li>Grants award under this topic will have to submit the following deliverable(s):</li> <li>Communication plan (to be submitted 6 months after the beginning of the grant together with the Dissemination and Engagement Plan).</li> </ul>

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

#### 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)<sup>144</sup>.
- 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.

<u>Scope</u>: Proposals are invited for a Coordination and Support Action to actively participate in the organisational and technical activities of the Trillion Parameter Consortium (TPC)<sup>144</sup> 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 areasof 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. A budget of 700,000 Euros 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 700,000 Euros 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 200,000 Euros will be allocated from DEP operational activities.

#### • Other Conferences in 2025

#### o 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 200,000 Euros are 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 150,000 Euros are 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 contractor – Real Dolmen. 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 budget includes new 2025 budget credits for a total amount of EUR 699 Million including EUR 357 Million of Participating States contributions to the AI Factories (TCO). In addition, it is proposed to reactivate budget credits from past years in 2025 for a total amount of EUR 234,8 Million EUR. The total revenue budget of the JU in 2025 is EUR 933,9 Million.

#### **Table 1 Revenue Commitment Appropriations**

	Executed Budget	Current Budget	2025 Budget			
REVENUE (EUR)	2023 (C1+ C2 credits)	2024 (C1+ C2 credits)	C1 Credits	C2 Credits	Proposed Budget (C1 + C2 credits)	
1. Fees and Charges						
2. EU Contribution with EFTA included	623,398,655	277,516,230	342,113,910	234,782,090	576,896,000	
of which Regulation (EU) 2021/1173	2 447 1 40	0.000.070	0.546.007	1.0.40.602	10.000.000	
Administrative (Title 1 and Title 2)	3,447,160	8,092,878	8,546,307	1,849,693	10,396,000	
of which old Regulation (EU) 2018/1488	2 270 082	1 280 000				
Administrative (Title 1 and Title 2)	2,279,982	1,280,000			-	
of which Regulation (EU) 2021/1173	617.652.201	268,129,663	333,567,603	232.832.397	566,400,000	
Operations (Title 3)	017,032,201	208,129,005	555,507,005	232,832,397	500,400,000	
of which old Regulation (EU) 2018/1488	19,312	13.688		100,000	100.000	
Operations (Title 3)	19,512	15,088		100,000	100,000	
3. Third Country Contribution	-	-	-	-	-	
4. Other Contributions	270,850,000	30,245,228	357,000,000	-	357,000,000	
4.1 Participating States	270,850,000	30,000,000	357,000,000	-	357,000,000	
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 AI-optimised or upgraded supercomputer			357,000,000		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		10,228				
Operations (Title 3)		10,228				
Total REVENUE	894,248,655	307,761,458	699,113,910	234,782,090	933,896,000	

#### Table 2 Revenue Payment Appropriations

				2025 Budget	
REVENUE (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	C1 Credits	C2 Credits	Total Amended Budget (C1 + C2 Credits)
1. Fees and Charges					
2. EU Contribution with EFTA included	157,429,603	566,961,110	24,546,307	555,009,690	579,555,997
of which Regulation (EU) 2021/1173 Administrative (Title 1 and Title 2)	3,447,160	8,092,878	8,546,307	1,849,693	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		531,086,096	531,086,096
of which old Regulation (EU) 2018/1488 Operations (Title 3)	91,754,318	100,488,802	16,000,000	22,073,901	38,073,901
3. Third Country Contribution		-	-	-	-
4. Other Contributions	48,407,346	152,385,387	100,853,399	2,790,948	103,644,347
4.1 Participating States	48,407,346	152,140,159	100,853,399	2,790,948	103,644,347
Contribution to the procurement MN5, Leonardo & Lumi	9,529,627	79,176,821	19,991,124		19,991,124
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	53,220,000	749,448	53,969,448
Contribution to the call of the quantum computers		34,041,500	27,642,275	2,041,500	29,683,775
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	125,399,706	557,800,638	683,200,345

#### 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**

			2025 Budget				
EXPENDIT URES (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	Cl Credits	C2 Credits	Proposed Budget (C1 + C2 credits)		
Title 1. Staff Expenditure	4,278,053	6,069,752	6,916,307	948,173	7,864,480		
11 Salaries & Allowances	3,728,086	5,253,704	6,068,307	902,173	6,970,480		
1100 - Temporary Agents	2,305,544	3,692,857	3,778,307	502,173	4,280,480		
1110 - Contractual Agents	1,422,541	1,419,432	2,000,000	400,000	2,400,000		
1120 - Interim, Trainees & SNEs		141,415	290,000		290,000		
12 Expenditure relating to recruitment	25,718	20,574	23,000		23,000		
13 Missions and travel expenses	201,695	362,000	300,000		300,000		
14 Socio-medical and training	322,554	237,273	315,000	46,000	361,000		
1400 - CAS & EU School transports		87,440	130,000		130,000		
1410 - Trainings		89,075	120,000	30,000	150,000		
1420 - Social measures for Staff		60,758	65,000	16,000	81,000		
1500 - HR administrative services		196,200	210,000		210,000		
Title 2. Building, Equipment and Operating Costs	1,449,089	3,435,127	1,630,000	901,520	2,531,520		
20 Buildings and associated costs	93,901	70,000	100,000		100,000		
21 Information Technology	333,344	526,351	360,000	160,000	520,000		
22 Movable property	2,549	32,192	40,000		40,000		
23 Current administrative expenditure	120,051	155,540	155,000		155,000		
24 External consultancy & auditing	5,201	382,906	100,000		100,000		
25 Internal Meetings	71,122	74,825	50,000		50,000		
26 Legal services	306,986	424,782	30,000	20,000	50,000		
27 Comm, Information & Events	90,250	232,096	375,000	110,300	485,300		
28 Experts and associated costs	425,684	1,536,434	420,000	611,220	1,031,220		
Total ADMIN (Tilte I and II)	5,727,142	9,504,879	8,546,307	1,849,693	10,396,000		

			2025 Budget				
E XPE NDITURE S (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	C1 Cr edits	C2 Credits	Proposed Budget (C1 + C2 cr edits)		
Total ADM IN (Tilte I and II)	5,727,142	9,504,879	8,546,307	1,849,693	10,396,000		
Title 3. Operational Expenditure							
30 Grants, HPC Operations, R&I Activities	225,019,312	210,104,866	137,046,946	71,553,054	208,600,000		
Regulation (EU) 2018/1488 Calls	19,312	126,917	-	100,000	100,000		
EuroHPC-2019-1	19,312	126,917	100,000		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	137,046,946	71,453,054	208,500,000		
c. Federation Pillar		-			-		
d. Technologies Pillar	185,000,000	88,677,949	28,000,000		28,000,000		
e. Applications Pillar	30,000,000	36,300,000	20,000,000		20,000,000		
f. Compentences & Skills Pillar		15,000,000					
g. International Cooperation Pillar	10.000.000	10,000,000	5,500,000		5,500,000		
h AI pillar		60,000,000	83,546,946	71,453,054	155,000,000		
31 HPC Infrastructure Activities	663,502,201	88,151,714	553,520,657	161,379,343	714,900,000		
Regulation (EU) 2018/1488	_	-	-	-	-		
LUMI - PreExscale		-			-		
LEONARDO - PreEx scale		-			-		
MNS5 - PreExscale		-			-		
Deucalion - Petascale		-			-		
Regulation (EU) 2021/1173	663,502,201	88.151.714	553,520,657	161,379,343	714,900,000		
AI-optimised or upgraded EuroHPC		,,					
supercomputers (TCO)			552,620,657	161,379,343	714,000,000		
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)	-	-			-		
Quantum computers	20,000,000				-		
Access and allocation of EuroHPC computing		1 000 000					
resources and services	120,000	1,800,000			-		
Industrial HPC supercomputer	12,260,601				-		
EuroHPC Summits	719,304	700,000	700,000		700,000		
User Forum Events	60,800	-	200,000		200,000		
De-prioritised calls from previous years	24,044,496	85,651,714			-		
Total OPERATIONAL (Title III)	888,521,513	298,256,580	690,567,603	232,932,397	923,500,000		
Total E XPE NDI TURE	894,248,655	307,761,458	699,113,910	234,782,090	933,896,000		

### Table 4 Expenditure Payment Appropriations

			2025 Budget			
E XPE NDITURE S (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	C1 Cr edits	C2 Credits	Proposed Budget (C1 + C2 cr edits)	
Title 1. Staff Expenditure	4,055,875	6,319,540	6,916,307	948,173	7,864,480	
11 Salaries & Allowances	3,664,102	5,284,839	6,068,307	902,173	6,970,480	
1100 - Temparary Agents	2,305,544	3,692,857	3,778,307	502,173	4,280,480	
1110 - Contractual Agents	1,358,558	1,450,567	2,000,000	400,000	2,400,000	
1120 - Interim, Trainees & SNEs		141,415	290,000		290,000	
12 Expenditure relating to recruitment	16,646	20,574	23,000		23,000	
13 Missions and travel expenses	180,581	413,159	300,000		300,000	
14 Socio-medical and training	194,546	237,273	315,000	46,000	361,000	
1400 - CAS & EU School transports		87,440	130,000		130,000	
1410 - Trainings		89,075	120,000	30,000	150,000	
1420 - Social measures for Staff		60,758	65,000	16,000	81,000	
15 - HR administrative services		363,694	210,000		210,000	
Title 2. Building, Equipment and Operating Costs	1,357,028	3,940,446	1,630,000	901,520	2,531,520	
20 Buildings and associated costs	83,851	81,055	100,000		100,000	
21 Information Technology	380,922	549,252	360,000	160,000	520,000	
22 Movable property	2,549	32,192	40,000		40,000	
23 Current administrative expenditure	109,675	196,098	155,000		155,000	
24 External consultancy & auditing	5,919	388,182	100,000		100,000	
25 Internal Meetings	53,988	95,279	50,000		50,000	
26 Legal services	192,004	619,117	30,000	20,000	50,000	
27 Comm, Information & Events	35,000	226,096	375,000	110,300	485,300	
28 Experts and associated costs	493,119	1,753,174	420,000	611,220	1,031,220	
Total ADM IN (Tilte I and II)	5,412,903	10,259,987	8,546,307	1,849,693	10,396,000	

			2025 Budget				
E XPE NDITURE S (EUR)	Executed Budget 2023 (C1+ C2 credits)	Current Budget 2024 (C1+ C2 credits)	C1 Cr edits	C2 Credits	Proposed Budget (C1 + C2 credits)		
Total ADM IN (Tilte I and II)	5,412,903	10,259,987	8,546,307	1,849,693	10,396,000		
Title 3. Operational Expenditure							
30 Grants, HPC Operations, R&I Activities	29,706,292	353,986,587	16,000,000	201,158,844	217,158,844		
Regulation (EU) 2018/1488 Calls	19,908,134	55,669,252	16,000,000	19,273,133	35,273,133		
EuroHPC-2019-1	5,015,453	5,941,249		676,117	676,117		
EuroHPC-2019-2		3,993,504			-		
EuroHPC-2019-3		515,000			-		
EuroHPC-2020 -1	3,129,855	9,239,771		8,797,497	8,797,497		
EuroHPC-2020 -2	4,164,937	9.033.956		6,589,759	6.589,759		
EuroHPC-2020 -3		10,419,282		1,004,213	1,004,213		
Opex Grants	7,597,889	16,526,489	16,000,000	2,205,547	18,205,547		
Regulation (EU) 2021/1173 Calls	9,798,157	298.317.335	-	181,885,710	181,885,710		
c. Federation Pillar		4,000,000		783,333	783,333		
d. Technology Pillar		171,028,014		103,452,969	103,452,969		
e. Applications Pillar	8,798,273	58,500,673		8,748,365	8,748,365		
f. Compentences & Skills Pillar	999,884	48,788,648		11,201,425	11,201,425		
g. International Cooperation Pillar		16,000,000		4,499,618	4,499,618		
h AI Pillar				53,200,000	53,200,000		
31 HPC Infrastructure Activities	170,717,754	355,099,924	100,853,399	354,792,102	455,645,501		
Regulation (EU) 2018/1488	83,616,544	125,901,300	19,991,124	2,800,768	22,791,892		
LUMI - PreExscale	68,510,638	4,433,829	2,183,617	1,878,888	4,062,505		
LEONARDO - PreEx scale	11,067,434	17,487,903	921,880	921,880	1,843,760		
MN5 - PreExscale Supercomputer	1,797,739	102,187,868	16,885,627		16.885.627		
Deucalion & Meluxina - Petascale	2,240,734	1,791,701			-		
Regulation (EU) 2021/1173	87,101,210	229,198,624	80,862,275	351,991,334	432,853,609		
AI-optimised or upgraded EuroHPC supercomputers (TCO)				60,000,000	60,000,000		
High-end (Exascale) supercomputers (TCO)	86,636,985	133,219,302	53,220,000	242,406,279	295,626,279		
Mid-range supercompters (TCO)		-		9,048,281	9,048,281		
Hyperconnectivity for HPC Resources call & Federation Call		10,775,084		28,000,000	28,000,000		
Upgrading EuroHPC supercomputers (TCO)		4,153,875		819,000	819,000		
Quantum computers		55,641,500	27,642,275	10,232,974	37,875,249		
Access and allocation of EuroHPC computing resources and services		1,000,000		584,800	584,800		
Industrial HPC supercomputer		3,400,000			-		
EuroHPC Summits	464,225	700,000		700,000	700,000		
User Forum Events				200,000	200,000		
De-prioritised calls from previous years		20,308,863					
Total OPERATIONAL (Title III)	200,424,046	709,086,511	116,853,399	555,950,945	672,804,345		
Total E XPE NDITURE	205,836,949	719,346,498	125,399,706	557,800,638	683,200,345		

#### 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
c. Federation Pillar			-	783,333	783,333
DIGITAL-EUROHPC-JU-2022-APPSUPPORT-01	PP	DEP		783,333	783,333
d. Technology Pillar			-	103,452,969	103,452,969
HORIZON-EUROHPC-JU-2024-DARE-SGA-04	РР	HE		89,990,009	89,990,009
HORIZON-EUROHPC-JU-2023-ENERGY-04		HE		13,462,960	13,462,960
e. Applications Pillar			-	8,748,365	8,748,365
HORIZON-EUROHPC-JU-2022-ALG-03		HE		500,000	500,000
HORIZON-EUROHPC-JU-2023-COE-01	PP/IP	HE		196,989	196,989
HORIZON-EUROHPC-JU-2023-COE-01-01	PP/IP	HE		599,784	599,784
HORIZON-EUROHPC-JU-2023-QEC-05-01		HE		7,451,592	7,451,592
f. Compentences & Skills Pillar			-	11,201,425	11,201,425
DIGITAL - EUROHPC-JU-2022-TRAINING-02		DEP		499,942	499,942
DIGITAL -EUROHPC-JU-2023-SME-01	PP/IP	DEP		1,999,979	1,999,979
DIGITAL-EUROHPC-JU-2022-NCC-01	11/11	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	РР/ГР	HE		500,000	500,000
HORIZON-EUROHPC-JU-2023-INCO-06	PP/IP	HE		3,999,618	3,999,618
h. AI Pillar			-	53,200,000	53,200,000
AI factories Soverign Cloud	PP/IP	CEF		23,200,000	23,200,000
Grants within AI Pillar	PP/IP	HE		30,000,000	30,000,000
Regulation	× /	1173 Total PA	-	181,885,710	181,885,710

\* 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
DComEX	1.		135,938	135,938
eProcessor	IP/FP		199,999	199,999
EXAFOAM			240,180	240,180
EuroHPC-2019-1		0	576,117	576,117
Late interest payments PA available			100,000	100,000
Total late interest		0	100,000	100,000
LUMI - OPEX		6,000,000		6,000,000
LEONARDO - OPEX	IP/FP	6,000,000		6,000,000
MN5 - OPEX		4,000,000	2,205,547	6,205,547
Opex Grants		16,000,000	2,205,547	18,205,547
Eupex_EuroHPC-2020-01a			5,465,472	5,465,472
The European Pilot_EuroHPC-2020-01a	IP/FP		2,583,602	2,583,602
HPCQS_EuroHPC-2020-01b	1		748,423	748,423
H2020-JTI-EuroHPC-2020-01		0	8,797,497	8,797,497
EPI EuroHPC-2020-02	IP/FP		6,589,759	6,589,759
H2020-JTI-EuroHPC-2020-02		0	6,589,759	6,589,759
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 Tota			19,273,133	35,273,133

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

Item	Type of	Funding	Type of Procurement	C1 Credits (EUR)		C2 Credits (EUR)	
	payment *		**	EU	PS***	EU	PS
b) Infrastructure Pillar				0	80,862,275	321,200,386	2,790,948
High-end / Exascale supercomputers				0	53,220,000	241,656,831	749,448
EUROHPC-2021 - CEI-EXA-01 - TCO	РРЛР	DEP	EHPC			157,067,673	749,448
EUROHPC-2022 - CEI-EXA-01 - TCO	РР/ІР	DEP	EHPC		53,220,000	84,589,158	
AI PILLAR				0	0	60,000,000	(
AI PILLAR - TCO	РРЛР	DEP	EHPC			60,000,000	
Midrange supercomputers				0	0	9,048,281	(
EUROHPC-2021-CEI-MR-01 - TCO	РР/ІР	DEP	JOINT			1,851,581	
EUROHPC-2022-CEI-MR-01-TCO	PP/IP	DEP	JOINT			7,196,700	
Upgrading EuroHPC supercomputers				0	0	819,000	(
EUROHPC-2022-CEI-UPG-01 - TCO	PP/IP	DEP	EHPC			819,000	
Quantum computers				0	27,642,275	8,191,474	2,041,50
EUROHPC-2022-CEI-QC-01 - CAPEX	PP/IP	DEP	EHPC		24,682,400	3,901,100	2,041,50
EUROHPC-2022-CEI-QC-01 - OPEX	PP/IP	DEP	EHPC			1,330,499	
EUROHPC-2023-CEI-QC-01 - TCO	PP/IP	DEP	EHPC		2,959,875	2,959,875	
Other Activities				0	0	1,484,800	(
ACCESSIT PLATFORM PROJECT	<b>РР/IР</b>	DEP	EHPC			584,800	
EUROHPC SUMMIT 2024/2025	РР/ІР	DEP	EHPC			700,000	
EUROHPC USER DAY 2024/2025	РР/ІР	DEP	EHPC			200,000	
c. Federation Pillar				0	0	28,000,000	-
HYPERCONNECTIVITY FOR HPC RESOURCES CALL	РРЛР	CEF2	EHPC			18,000,000	
EUROHPC FEDERATION PLATFORM EUROHPC/2023/CD/0003/LC-03662828	РРЛР	CEF2	EHPC			10,000,000	
	Regulatio	on (EU) 2021/	1173 TotalPA	0	80,862,275	349,200,386	2,790,94

\* 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	Type of C1 Credits (EUR)		C2 Credits (EUR)	
пеш	payment*	EU	PS	EU	PS
LUMI - PreExscale	IP/FP		2,183,617	1,878,888	
LEONARDO - PreExscale	IP/FP		921,880	921,880	
MN5 - PreExscale	IP/FP		16,885,627		
Regulation (EU) 2018/1	488 Total PA	0	19,991,124	2,800,768	0

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

#### Table 6: Overview and details of reactivated Budget in 2025 (Administrative)

Budget to be Reactivated (Administrative)	Commitment Appropriations (CA)	Payment Appropriations (PA)
Reactivation of Available Credits from the previous year	1,949,693	1,949,693
n-1 - Credits (C1 from FY2024)		
n-2 - Credits (C1 from FY2023)	1,949,693	1,949,693
n-3 - Credits (C1 from FY2022)		

Administrative Budget Structure (C2 Credits)	Commitment Appropriations to be reactivated	Payment Appropriations to be reactivated
EHPC-B2025-1100	502,173	502,173
EHPC-B2025-1110	400,000	400,000
EHPC-B2025-1410	30,000	30,000
EHPC-B2025-1420	16,000	16,000
EHPC-B2025-2100	160,000	160,000
EHPC-B2025-2600	20,000	20,000
EHPC-B2025-2700	110,300	110,300
EHPC-B2025-2800	711,220	711,220
Grand Total	1,949,693	1,949,693

# Table 7: Overview and details of reactivated Budget in 2025 (Operational)

Budget to be Reactivated (Operational)	Commitment Appropriations (CA)	Payment Appropriations (PA)
Reactivation of Available Credits from the previous year	232,832,397	555,850,945
n-1 - Credits (C1 from FY2024)	53,158,445	
n-2 - Credits (C1 from FY2023)	113,437,320	415,616,100
n-3 - Credits (C1 from FY2022)	66,236,632	140,234,846

Operational Budget Structure (C2 Credits)	Commitment Appropriations to be reactivated	Payment Appropriations to be reactivated
EHPC-B2025-3000		19,173,133
EHPC-B2025-3010	52,453,054	146,700,952
EHPC-B2025-3020		11,984,759
EHPC-B2025-3030	19,000,000	23,200,000
EHPC-B2025-3100		2,800,768
EHPC-B2025-3110		
EHPC-B2025-3120	161,379,343	323,991,334
EHPC-B2025-3130		28,000,000
Grand Total	232,832,397	555,850,945

#### 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.

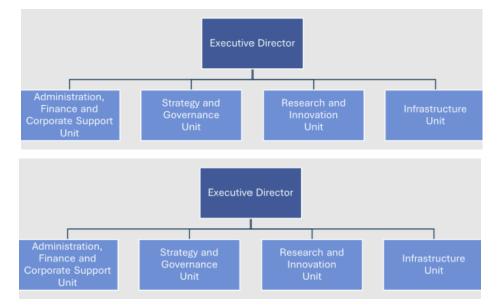
Following the Staff Engagement Survey carried out in 2024, follow-up actions will be discussed and carried out during 2025.

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	27	27	27
Seconded National Experts (SNE)	1	0	0	0	0	0	0
Total Staff	16	47	54	54	54	54	54

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), with 27 FTEs.

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

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

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