

The EuroHPC Supercomputing Ecosystem -The numbers

8* **systems** comprising **21 partitions offering** of aggregated sustained Linpack performance ...soon to be increased** to 15597 CPU Nodes (AMD/Intel x86 and Fujitsu ARM) 7869 GPU Nodes 30324 GPUs (NVidia A100/H100/H200, AMD MI250X) 27104 GPUs coming ** soon (NVIDIA GH200)

Budget (CapEx)

Total budget: **510,000,000 €** EU Contribution: **240,000,000 €**

Total budget: **567,800,000 €** EU Contribution: **283,900,000 €**

Mid-range & upgrades program

Total budget: **153,100,000 €** EU Contribution: **53,600,000 €**



Budget refers to acquisition costs only. EuroHPC co-funds operating costs for Pre-exascale/Exascale systems (50%) and Mid-range/Upgrades (35%).



Impact

145,161,896 node hours Awarded to

2,334 Projects

- Destination Earth AI Boost – Training of European LLMs





Daedalus (GR

Hyperconnected

Contract

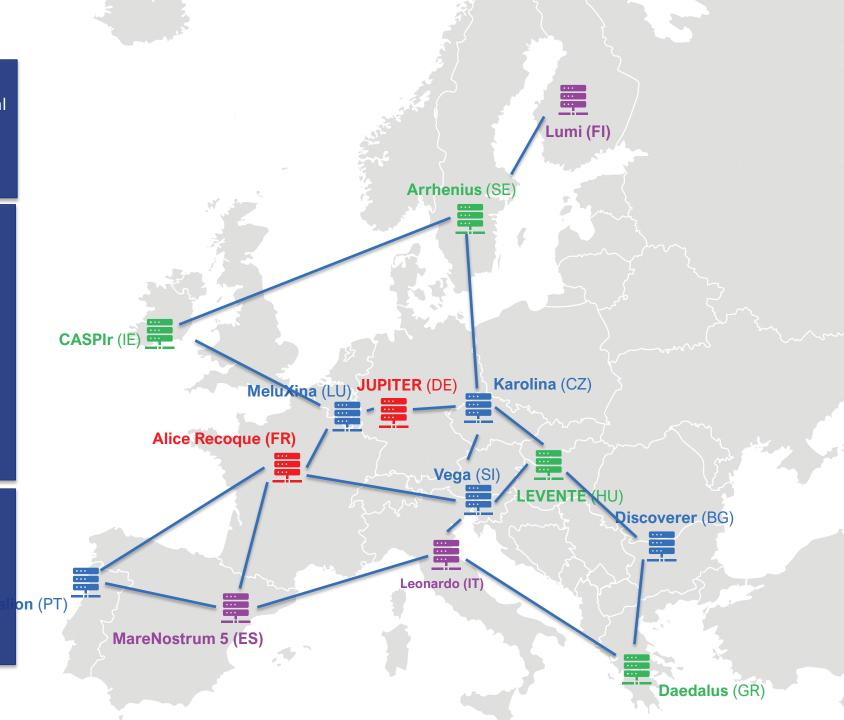
- **GÉANT**, the Association of European National Research and Education Networks (NRENs)– Implementing partners
- Contract value: €60 million
- Duration: **48** months

Goals

- Build a secure, federated, and future-proof connectivity infrastructure for AI, HPC and Quantum systems across Europe.
- 222 Points Of Interest (PoIs)
- Deliver terabit-per-second capacity with robust security, flexible, and future-proof services
- To benefit: research communities, SMEs, startups, public sector, industry, and innovation stakeholders

Timeline

- 2026 High Level Design (HLD) and HyperConnectivity Service Area (HCSA) delivered; inclusion of Priority POIs 1&2
- 2026 -2029 Progressive inclusion of PoIs
- 2029 Fully hyperconnected ecosystem in operation



Federated

Goals



A single federated identity across all AI and HPC machines for each user (eIDAS based, e.g. SME registry, EU Wallet etc.)



Uniform and **secure** access to all federated machines



Provision of multitenancy in secure environment



Interactive web-based usage



Advanced features for workflows and interactive graphical Al usage interface (e.g. Kubernetes)



Data transfer methods such as S3 and similar to and from external and internal data clouds, data lakes and data spaces.



Unified AI and HPC software across all federated machines



Smart scheduling capabilities to optimize compute usage and increase the level of abstractions for the provided compute capacity



Connection to HPC in Europe portal that serves as EU training coordination place

Deucalion (PT)



MareNostrum 5 (ES)

Contract

- A consortium led by CSC IT Center for Science, with NORDUnet, University of Tartu, Ghent University, and VSB Technical University of Ostrava's IT4Innovations and GEANT.
- Expected duration: 5 years
- Total budget: 20.000.000,00 €

Timeline

- Project start January 2025 (Contract signed December 2024)
- 1st phase (2025-2026) The development of a Minimum Viable (Federation) Platform (MVP) covering six key areas including federated AAI, resource allocations, and complex workflow manager including smart scheduler.
 - 1st release: Q1/2026 with integration to currently online EuroHPC HPC and AI systems
 - 2nd release: Q4/2026 additional EFP components and integration online HEs, AI factories and quantum systems + initial integration of Fenix, SIMPL and EOSC



EuroHPC Quantum Computers

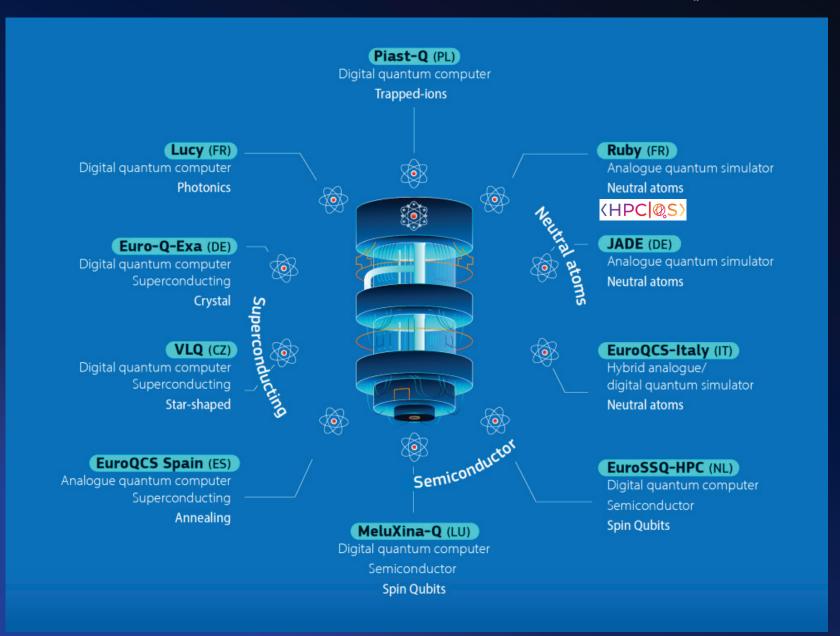


10 Quantum Computers procured (2 Quantum Simulators as part of the HPCQS project)

2 systems recently inaugurated

- Piast-Q (PSNC, Poznan)
- VLQ (IT4I, Ostrava)

Resources to be offer soon through the EuroHPC Access Calls!





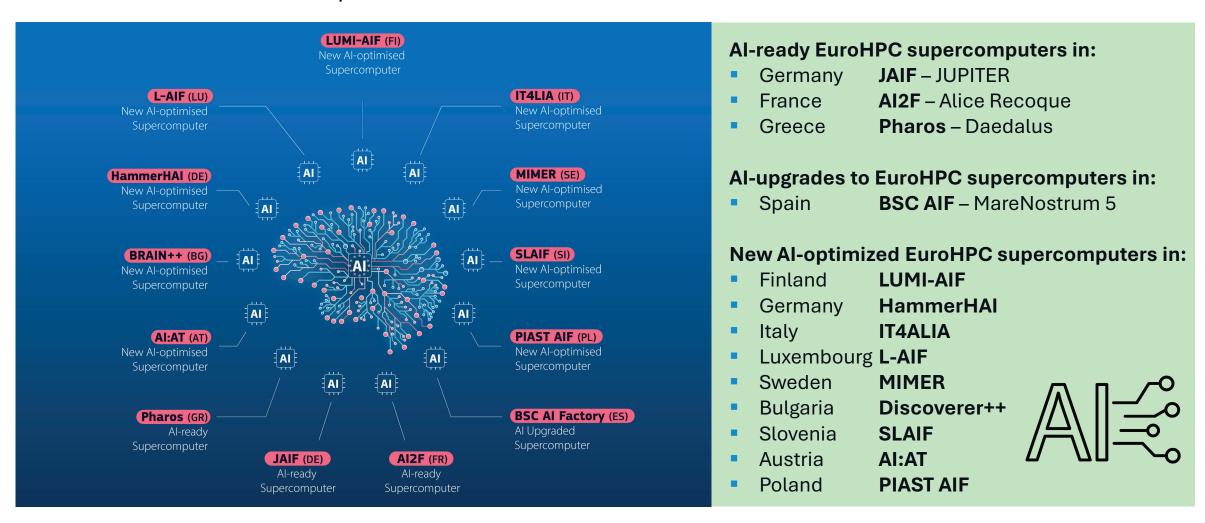
At this point we should expect to say: "Mission Accomplished"...

but then...

... we were given a new mission

THE AI FACTORIES

EuroHPC JU selected 13 EU sites that will host the first AI Factories – to drive Europe's leadership in AI.Ecosystem to be further strengthened by additional AI Factories coming out from the **3**rd **cut-off of AIF CEI** and the **AIF Antennas** Horizon Europe call.



Al Factories pull together EU and national resources, in a collaborative effort of 21 European countries

Al Systems offered/planned

AIFs using existing systems

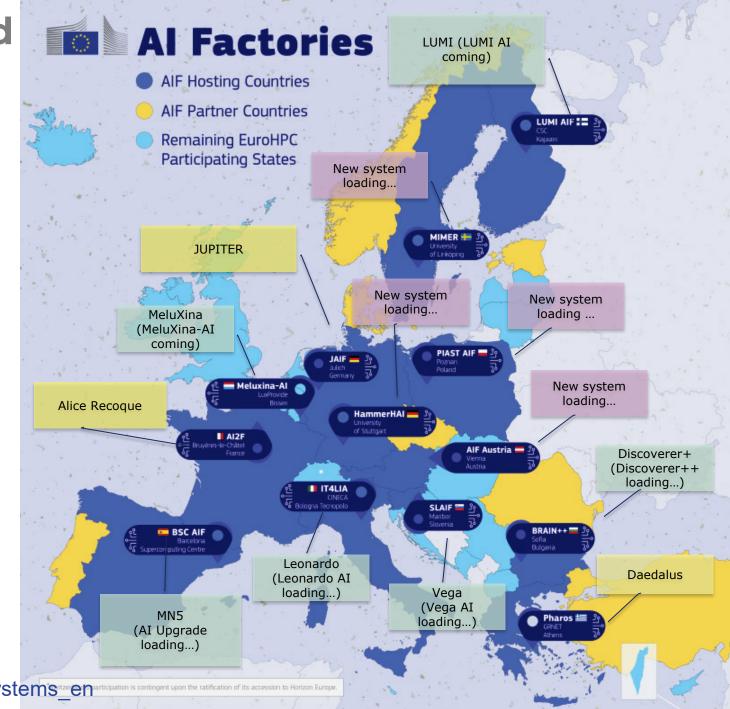
- **JAIF** (JUPITER)
- AI2F (Alice Recoque)
- Pharos (Daedalus)

AIFs temporarily offering existing systems

- **BSC** (MN5... waiting for MN5 upgrade)
- IT4LIA (Leonardo/LISA... waiting for Leonardo-AI)
- LUMI AIF (LUMI.. waiting for LUMI-AI)
- LuxProvide (MeluXina... waiting for MeluXina-AI)
- BRAIN++ (Discoverer+... waiting for Discoverer++)
- SLAIF (Vega... waiting for Vega-AI)

AIFs with upcoming new systems

- HammerHAI | HLRS, Stuttgart
- PIAST AIF | PSNC, Poznan
- AI:AT Austria | ACA, Vienna
- MIMER | LU, Linkoping



https://eurohpc-ju.europa.eu/ai-factories/ai-factories-systems_en

What to expect from the EuroHPC Al-optimised supercomputers,

EuroHPC Joint Undertaking

- Al optimised GPU architectures: Emphasis on FP32, FP16 and FP8 performance
- Tightly integrated on node level Memory coherency
 - NV Link, UALink, Infinity Fabric
- Revised benchmarks
 - HPL and Top500 not the driving metric.
- Dense interconnect on the partition level
 - At least one link per GPU
 - Software friendly
 - Traditional Infiniband but also Ethernet (e.g. Ultra Fast Ethernet)

- Richer software/middleware stacks
 - Slurm is not the king
 - Kubernetes, containers, virtualisation and relevant workflow and resource management tools

MLOPs

- Support for the complete AI training/inference lifecycle: Preparation, fine tuning, augmentation, model catalogues.
- Multitenancy and advanced security.
 - User isolation on compute, storage and network layer



EuroHPC AI supercomputers will offer diverse architectures and design choices suited for the specific goals of the various AI Factories



Think bigger... think giga...

Al Gigafactories under the EuroHPC JU

Large-scale facilities designed to develop, train, and deploy the next generation most complex Al models at an unprecedented scale (e.g., tens of trillions of parameters).

· Essential for Europe to be able to compete on the global level and ensure its strategic autonomy in scien Loading: itical industrial sectors.

 Building on the concept of Al Factories, taking it to the next level by integrating co beyond 100 000 advanc

networks, energy-efficie

Revised EuroHPC JU regulation mandating the JUs role, budget Focus on power cap and expected outcome of the Gigafactories program

Federated with the EuroHPC network of Al Factories and sovereign cloud.

Need for **public-private partnerships** given the magnitude of the required investments.





THANK YOU

EUROHPC JU ACCESS MODES AND OPPORTUNITIES

KLARA MEŠTROVIĆ

Head of Sector Peer-Review

EuroHPC JU User Days, 30 September 2025





EuroHPC JU and supercomputing access

Procuring world-class:

- Supercomputers
 - Al Factories
- Quantum computers

Providing access via different access modes

Implementing peer-review process per access mode





PREPARATORY ACTIVITIES

BENCHMARK ACCESS

DEVELOPMENT ACCESS

PRODUCTION ACTIVITIES

EXTREME SCALE ACCESS

REGULAR ACCESS

Access modes



SCIENCE

AI FOR SCIENCE &
COLLABORATIVE EU PROJECTS
ACCESS

INDUSTRIAL INNOVATION

LARGE SCALE ACCESS

PLAYGROUND ACCESS



PREPARATORY ACTIVITIES

BENCHMARK ACCESS

DEVELOPMENT ACCESS

PRODUCTION ACTIVITIES

EXTREME SCALE ACCESS

REGULAR ACCESS





For code and scalability tests

Access duration <u>2-3 months</u>
Fixed allocation between 200 and 2.500 node hours
Allocation process duration – 2 weeks after the cut-off date



For code and algorithm development and optimization

Access duration <u>6-12 months</u>
Fixed allocation between 800 and 4.500 node hours
Allocation process duration – 2 weeks after the cut-off date

Access based on technical feasibility

For high-impact, high-gain research applications requesting extremely large allocations

Access duration <u>12 months</u>
Allocations between 100.000 and 3.000.000 node hours
Peer-Review process duration – 6 months after the cut-off date



Access based

criteria

on technical feasibility and evaluation

For research applications requesting large allocations

Access duration <u>12 months</u>
Allocations between 20.000 and 1.800.000 node hours
Peer-Review process duration – 4 months after the cut-off date



PREPARATORY ACTIVITIES

BENCHMARK ACCESS

DEVELOPMENT ACCESS

PRODUCTION ACTIVITIES

EXTREME SCALE ACCESS

REGULAR ACCESS

EVALUATION CRITERIA EXTREME SCALE & REGULAR ACCESS

CRITERIA:

- EXCELLENCE
- INNOVATION & IMPACT
- QUALITY & EFFICIENCY OF THE IMPLEMENTATION



SCIENTIFIC EXPERTS

Access Resource Committee &



TECHNICAL EXPERTS

Scientific Reviewers

UPCOMING CUT-OFF DATES

- BENCHMARK & DEVELOPMENT ACCESS continuously open with monthly cut-off dates
- EXTREME SCALE ACCESS 27 October 2025
- REGULAR ACCESS TBD March 2026





PREPARATORY ACTIVITIES

BENCHMARK ACCESS

DEVELOPMENT ACCESS

PRODUCTION ACTIVITIES

EXTREME SCALE ACCESS

REGULAR ACCESS

Access modes



SCIENCE

AI FOR SCIENCE &
COLLABORATIVE EU PROJECTS
ACCESS

INDUSTRIAL INNOVATION

LARGE SCALE ACCESS

PLAYGROUND ACCESS





Access based on technical feasibility and evaluation criteria



Access based on technical feasibility

For AI applications performing scientific research activities

Access duration 6 months

Allocations between 20.000 and 90.000 node hours
Peer-Review process duration – 1 month after the cut-off date

For industrial AI applications with high impact needing large allocations

Access duration <u>3, 6 or 12 months</u>
Allocations between 50.000 and 2.400.000 GPU hours
Peer-Review process duration – 2 weeks after the cut-off date

For new users or those with smaller computational needs for performing AI computations

Access duration <u>1, 2 or 3 months</u>
Fixed allocations of 5.000 GPU hours
Allocation process duration – 2 working days

For industrial users familiar with HPC environments requiring fast access

Access duration <u>1, 2 or 3 months</u>
Allocations between 10.000 and 50.000 GPU hours
Allocation process duration – 4 working days



SCIENCE

AI FOR SCIENCE &
COLLABORATIVE EU PROJECTS
ACCESS

INDUSTRIAL INNOVATION

LARGE SCALE ACCESS

PLAYGROUND ACCESS

EVALUATION CRITERIA AI FOR SCIENCE & LARGE SCALE ACCESS

EuroH Joint Under

CRITERIA – AI FOR SCIENCE:

- EXCELLENCE
- INNOVATION & IMPACT
- QUALITY & EFFICIENCY OF THE IMPLEMENTATION

CRITERIA – LARGE SCALE:

- INNOVATION
- IMPACT







INDUSTRY INNOVATION GROUP

UPCOMING CUT-OFF DATES

- PLAYGROUND & FAST LANE ACCESS continuously open, no cut-off dates
- LARGE SCALE ACCESS 15 October 2025
- AI FOR SCIENCE ACCESS 24 October 2025



SCIENCE

AI FOR SCIENCE &
COLLABORATIVE EU PROJECTS
ACCESS

INDUSTRIAL INNOVATION

LARGE SCALE ACCESS

PLAYGROUND ACCESS





Principal Team Investigator members

ORGANIZATION COUNTRY

Horizon 2020 countries

Petascale systems
Pre-exascale systems

Horizon Europe countries

Exascale system
Upcoming second
exascale, mid-range
and quantum systems



Principal Investigator

ORGANIZATION TYPE

Access modes for industry

Industry affiliation

Special access tracks

Research, industry or public sector affiliation



EuroHPCJoint Undertaking

ELIGIBILITY

Who can apply?





















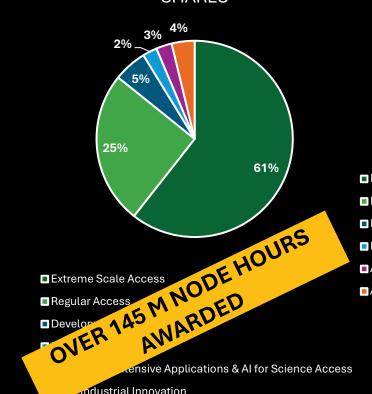


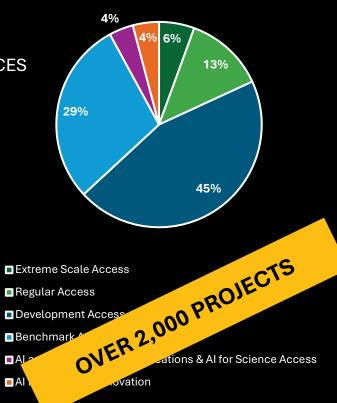


STATISTICS

ALL ACCESS MODES - AWARDED PROPOSALS **SHARES**

ALL ACCESS MODES - AWARDED RESOURCES **SHARES**





AWARDED PROPOSALS AND RESOURCES PER ACCESS MODE		
ACCESS MODE	PROPOSALS AWARDED	NODE HOURS AWARDED
EXTREME SCALE ACCESS (Dec 2022-Apr 2025)	130	87,978,597
REGULAR ACCESS (Dec 2021-Mar 2025)	293	36,530,037
DEVELOPMENT ACCESS (Jan 2022-Sep 2025)	1,050	7,951,567
BENCHMARK ACCESS (Jan 2022-Sep 2025)	676	3,459,667
Al and Data-Intensive Applications Access (Apr 2024-Apr 2025)	79	3,266,600
Al for Science and Collaborative EU Projects Access (June 2025)	10	496,000
Playground Access (April 2025-Sep 2025)	48	49,375
Fast Lane Access (April 2025-Sep 2025)	28	195,678
Large Scale Access (April 2025-Sep 2025)	20	5,234,375
TOTAL	2,334	145,161,896

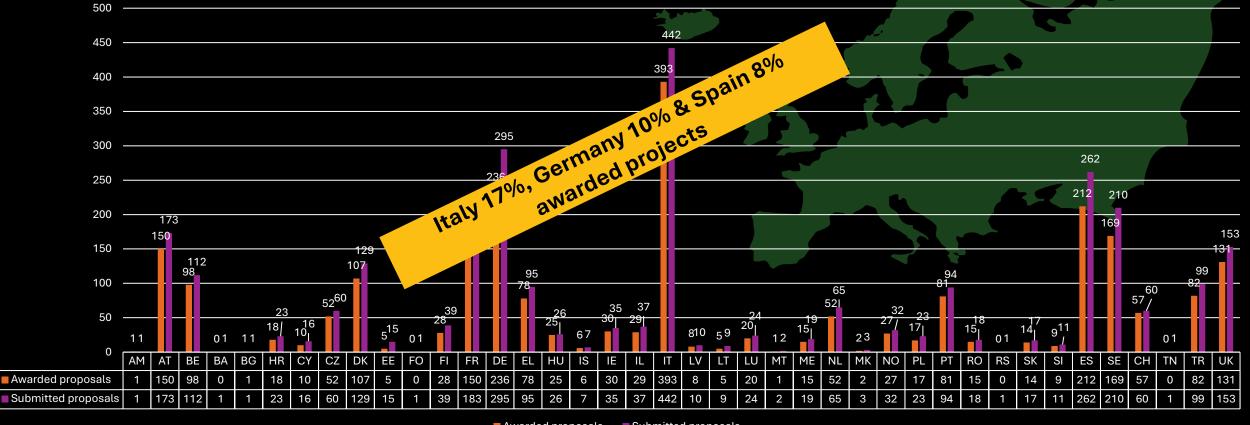
industrial Innovation





STATISTICS

ALL ACCESS MODES – Principal Investigator/Project Lead affiliation countries distribution - awarded vs submitted proposals numbers





THANK YOU!

To the members of the Peer-Review sector

To our Hosting Entities

To our evaluators

To the colleagues in the JU

To our Access Resource Committee

To our users

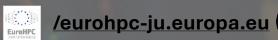
To our projects

For more information, feel free to visit our website and social media or contact us at:



access@eurohpc-ju.europa.eu aif.access@eurohpc-ju.europa.eu







/EuroHPC_JU



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EuroHPC Supercomputers







Luigi Del Debbio

The University of Edinburgh



EuroHPC Joint Undertaking



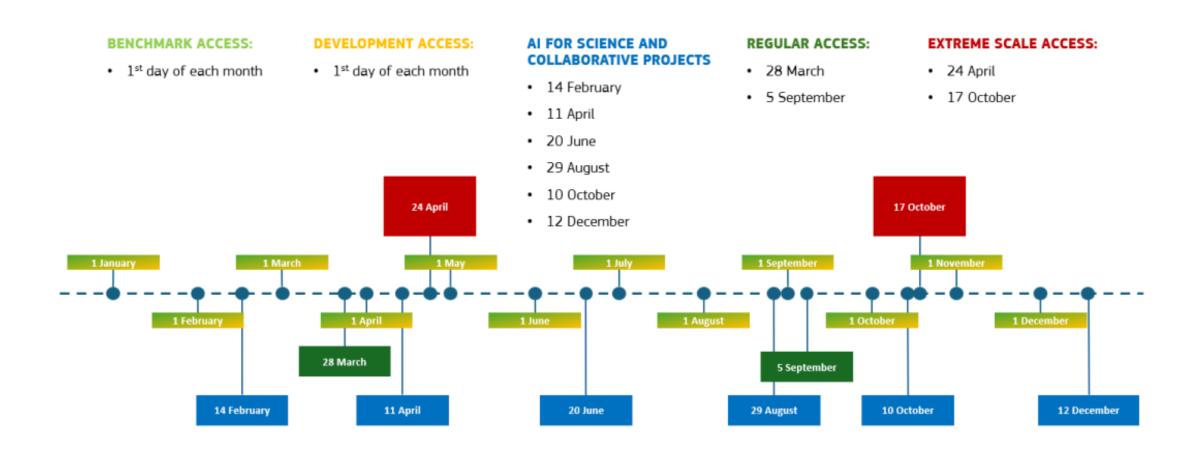
resource allocation

A single panel across all domains – one-year **focused** applications

Raises the bar for all domains

Quality of applications has improved – frequency of calls

Very expensive in terms of human resources (thank you!)



peer review is hard! (but the best)

- a good proposal needs to have
- ... solid motivations (beyond state-of-the-art?)
- ... ambitious goals (why do you need Extreme Scale? Regular call?)
- ... performant software (are you ready for Extreme Scale? support?)
- ... requests that are **justified** by scientific milestones

- all of this needs to be in the application!
- ... needs to be clearly stated for external reviewers
- ... and for a majority of panel members

evaluation

we try to give clear guidance on the criteria

please follow the instructions...

benchmark using production code on the required system

we revise our criteria as the field evolves

we try to communicate any changes quickly...

send us feedback - we do take it into account

resource allocation

- resource allocation is the management of insufficient resources
 - what could you do with half of the requested time?
- I would love to allocate all proposed projects

resource allocation

- resource allocation is the management of insufficient resources
 - what could you do with half of the requested time?
- I would love to allocate all proposed projects

- ... actually, **NO**, I would only allocate the good ones!
- there are two calls per year, this allows rejected projects to improve and resubmit quickly
- this is a great resource, projects do improve

closing remarks

try buying computer time?

cloud providers charge for 250k node-hr... M€

EuroHPC is a fantastic research infrastructure

we want to make the best use of it – broad portfolio of high-impact performant softwares

help the ARC: keep submitting strong proposals

make sure fundamental research remains a core priority!

EuroHPC should invest in creating a stronger interface with industry

huge thanks to my partners in crime!

- Evangelos Floris
- Klara Mestrovic
- Veneta Boneva
- Laura Martinez Calvo
- Annika Kossack

- Theo Brandmeyer
- Dobromir Vasilev
- Catarina Guerreiro
- Dora Marton

754201



OBJECTIVES



MINERVA is a distributed, European-wide HPC-enabled Al application support service

It brings together expertise from EuroHPC Hosting Entities and partners representing major European stakeholders in Al.

MINERVA acts as a central hub for cutting-edge European competences in large-scale ML/Al research and development.

It started in January 2025, and the project's duration is 36 months.

What MINERVA Aims To Achieve



What we do

- Offer a rich service portfolio covering several levels and types of support.
- Interact with AI communities to identify needs and update the MINERVA service portfolio.
- Increase competences of AI communities on AI n HPC.
- Ensure models are developed according to ethical and responsible Al regulations.

- Support: Operating an EU-wide support centre.
- Knowledge transfer: Publishing best practice guides and guidelines.
- Benchmarking: Evaluating model performance on supercomputers.
- Data Access: Providing information on access to public datasets.
- Training Programs: Providing "AI on HPC" training program.
- Community Hub: Supporting large-scale open-source ML/AI research and development on HPC.



do it

The MINERVA Support



To deliver support that is both structured and flexible, MINERVA recognises that users may need help on different topics and in different ways. We organise our services along those two key principles:

Service Levels (L1-L5)

These define the thematic areas where support is offered, reflecting the kinds of challenges AI users typically face, from porting workflows to HPC (L1), scaling models and workflows (L2), to pre-training (L3) and fine-tuning foundation models (L4), as well as complying with ethical and regulatory requirements (L5).

Support Types (T1-T4)

These describe how the support is delivered – from quick technical help (T1) to long-term engineering collaborations (T4).

✓ Unlike the Levels, these Support Types are an internal coordination tool to help allocate resources and tailor support formats to user needs.

This structure allows MINERVA to respond effectively to diverse user needs while making the best use of partner expertise and ensuring high-quality support for the European AI community.

SERVICES



L1

Porting AI
Applications &
Workflows to HPC

L2

Optimization &
Scaling of AI
Libraries on HPC

L3

Pre-training of Large-Scale Foundation Models **L4**

Specialization & Fine-Tuning of Foundation Models

L5

Ethical & Responsible Al Support

One point of entry support@minerva4ai.eu

SERVICES



Support Type	Goal	Scope	Time to resolution	Delivery	Trigger
T1 - Assistance	Quick resolution of specific issues	Debugging, configuration, usage questions	Few days	Remote only	Ticketing system
T2 - Consulting	Strategic guidance for planning and theoretical questions	Proposals, regulation, architecture, resources	Up to 2 weeks	Remote / 📳 Onsite optional	Ticketing system Scheduled request
T3 - Workshop	Accelerate workflows through hands-on engineering support	Profiling, performance tuning, scaling	Up to 2 months	Remote / 🗐 Onsite optional	Ticketing system Evaluation-based selection & Partner availability
T4 - Embedded Support	Long-term collaboration on advanced AI projects	Scaling, fine-tuning, large model training, data handling	Up to 6 months	Remote (with meetups recommended)	Ticketing system Evaluation-based selection & Partner availability

SERVICES & MORE



L1

Porting AI
Applications &
Workflows to HPC

L2

Optimization &
Scaling of AI
Libraries on HPC

L3

Pre-training of Large-Scale Foundation Models L4

Specialization & Fine-Tuning of Foundation Models

L5

Ethical & Responsible AI Support

Specialised/Advanced trainings for the Al communities ICIAP – EurIPS

Catalogues of models and datasets

Best Practice Guides on Al on HPC

Benchmarks reports

Who can access MINERVA support



MINERVA services are open to all actors in the European AI ecosystem – regardless of technical background or experience with HPC. If you're working with AI and face technical, scaling, or regulatory challenges, MINERVA is here to help.

We welcome requests from:

- Academic researchers (PhD students, postdocs, principal investigators)
- Public sector teams applying AI in areas like health, climate, education, or policy
- Start-ups and SMEs* developing Al-driven products or services
- Larger companies* with advanced or specialized Al use cases
- Al engineers and developers aiming to scale models or optimize performance
- **Project consortia** preparing proposals for national or European funding calls

★ No HPC access? We can guide you through the process of applying for resources, choosing the right infrastructure, and getting started with your first project.

Partners























Get Involved!



- Visit the MINERVA website https://minerva4ai.eu
- Follow our news on LinkedIn
 https://www.linkedin.com/company/minerva-european-support-centre-for-scalable-ai-research-and-deployment
- Participate in our user needs survey!
- Submit your support request via the AISC portal [support@minerva4ai.eu].



MINERVA
European
Support Centre
for Scalable AI
Research and
Deployment





Reach out to me @ \[\llowline{l.morselli@cineca.it} \]



Thank you





This project has received funding from the European High-Performance Computing Joint Undertaking (JU) under grant agreement No 101182737. The JU receives support from the Digital Europe Programme.



Supporting the competitiveness and innovation potential of SMEs: Fortissimo Plus (FFplus)

EuroHPC User Days 2025 Copenhagen

Guy Lonsdale, scapos AG



Overview



- Intro to the Fortissimo Approach & the FFplus project
 - HPC for Business Innovation, Fortissimo Success Stories
- The FFplus open calls for Business Experiments and Innovation Studies

Call Stats & Call News

Fortissimo & Fortissimo-2

Fortissimo – 2013-2016



 Business relevant investigations and demonstrations of simulation services in the Fortissimo HPC Cloud creating <u>future business benefits for</u> <u>manufacturing SMEs</u>

Fortissimo 2 – 2015-2018



 Demonstrating the business potential of an ecosystem for HPC-Cloud services, specifically for applications involving simulation of coupled physical processes or highperformance data analytics.





Political context

- All major economies world-wide are investing in large supercomputers on the road to Exascale
- EuroHPC is a major commitment by the European Union
- Business Case is for Science and Industry
- European citizens expect their taxes to be spent wisely for the good of everyone
- We must ensure our Universities and our Companies can access and benefit from investment in supercomputing







Funded under H2020-JTI-EuroHPC-2019-2 1.9.2020-31.10.2023



FF4EuroHPC in numbers



6
project
partners



high-quality experiments



million funding budget

Experiment partners

C.

118 organisations

22 countries



wide variety of industrial sectors, focus on

manufacturing

57%

The Fortissimo Approach

- Execution of "experiments" with SMEs, delivering real business impact through use of HPC
- The bulk of project funding is used for these experiments and the highest quality, innovative SME-oriented experiments are acquired through the execution of open calls for proposals

https://www.ff4eurohpc.eu/en/success-stories/

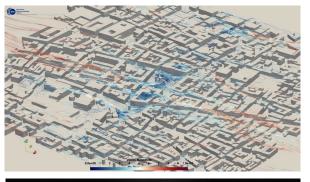
FF, FF-2, FF4EuroHPC:

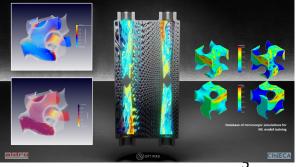
121 success stories were produced in collaboration with 310 partners from more than 20 European countries.











Examples of business benefits

ff^{+}

Multi-Head Additive Manufacturing with Optimal HPC Thermal Stabilization

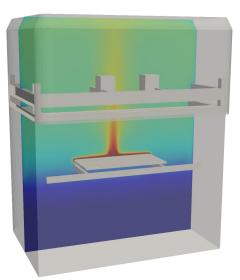
The vision of this experiment was to establish and predict the impact of this heat on the structure and motion system of the machine using HPC infrastructure.

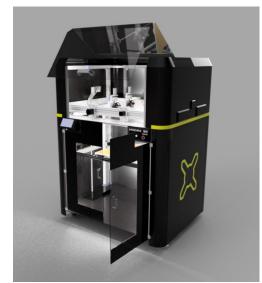
Business Benefits

- Shortening of product delivery time to the customer by 30-50%.
- Cutting costs in production by 15-30%.
- Greater accuracy of 3D printers is expected to increase sales by 20-30%.
- Creation of jobs for new, highly skilled employees

End User: Mikrotvornica

HPC Center: Ruđer Bošković Institute





Examples of business benefits



Improvement of Productivity in Aquaculture

The experiment used HPC and AI to help aquaculture farms better manage volatility and boost productivity. By analysing data on fish behaviour, health, and growth, it enabled smarter decisions, reduced losses, and supported more stable and scalable operations.

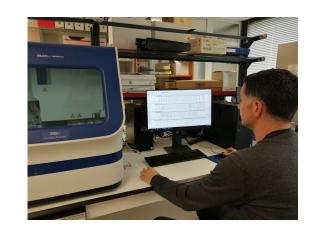
Business Benefits

- 30% reduction in predictive model error through HPC
- Shortening time to production in new user facilities or new procedures by 50%
- Business know-how for data-driven decisions for aquaculture farmers
- 7% improvement in fish growth for the end user

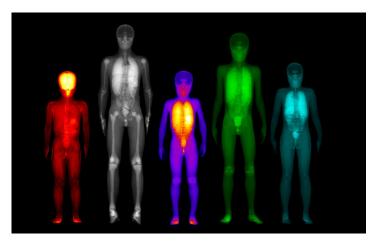
End Users: Nueva Pescanova- Insuiña and Geneaqua

Technology provider: <u>DEICOM</u>

HPC provider: CESGA

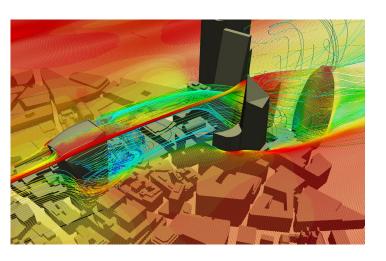




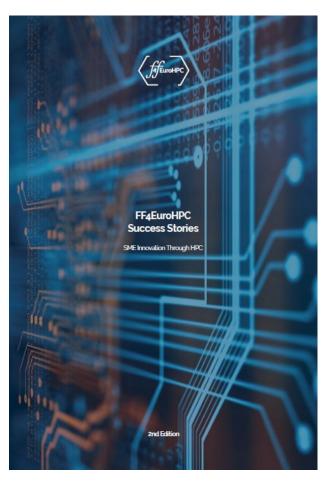


Success Stories









GET INSPIRED!

- Website presentation
- Videos
- Success Stories Booklets



FFplus Consortium & Project Data



- Fortissimo Plus
- Funded by the EuroHPC JU action DIGITAL-EUROHPC-JU-2023-SME-01 "Supporting the competitiveness and innovation potential of SMEs".
- Commenced 1.5.2024; 48 months duration
- Coordinator

High-Performance Computing Center Stuttgart

Other Partners:











FFplus Objectives





Empower SMEs and Start-Ups with advanced computational capabilities based on HPC, enabling them to drive innovation, enhance competitiveness, and overcome challenges in the digitalisation of R&D and business processes.

FFplus will execute 6 open calls (3 for business experiments, 3 for innovation studies) with a funding budget of over 24 M€.









Business experiments

will address the uptake of HPC by SMEs new to using HPC to solve specific business challenges

Participate in the Open Call for Business Experiments!





Innovation studies

will support European SMEs and Start-ups already active in the field of generative Al technology, which lack the necessary computational resources to scale up.

Participate in the Open Call for Innovation Studies!

HPC Computing Resources



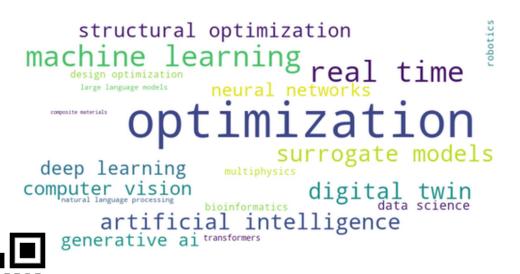
- There is an expectation that FFplus sub-projects make use of the HPC resources provided under the EuroHPC JU access schemes (use of nationally provisioned HPC resources is considered equivalent).
- FFplus cannot provide computing resources itself, nor does it have any special allocation of time on the EuroHPC JU systems.

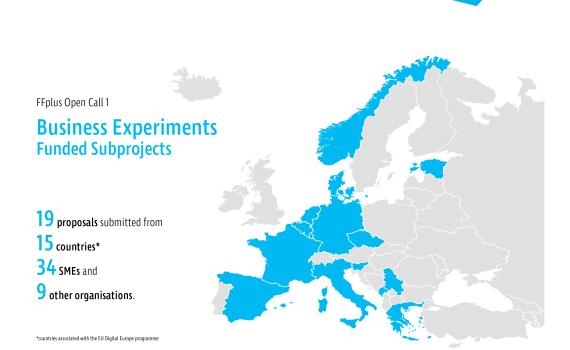


OPEN CALL-1 STATS – Business Experiments:

126 proposals from 30 countries, involving 183 SMEs and 40 other organizations.

19 business experiments are funded, including participants from 15 EU countries.



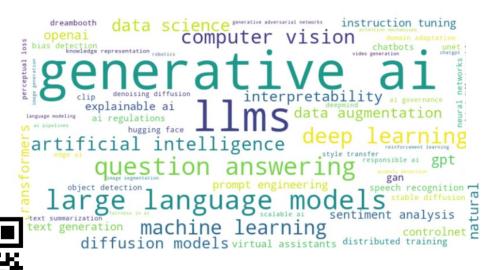


Belgium, Czechia, Denmark, Estonia, France, Greece, Germany, Italy, Luxembourg, Montenegro, the Netherlands, Norway, Serbia, Spain and Slovenia

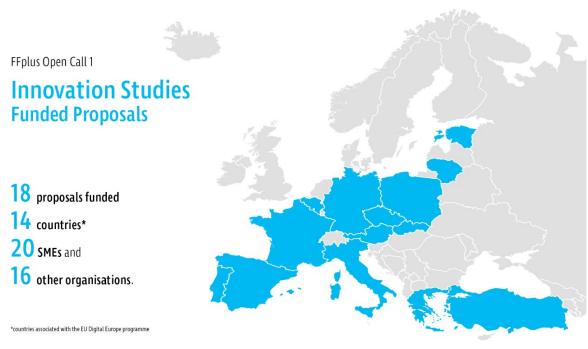
OPEN CALL-1 STATS – Innovation Studies: Country Statistics

The Innovation Studies Call attracted **62 proposals from 24 countries**, involving 83 SMEs and 36 other organizations.

18 innovation studies are funded, including participants from 14 European countries.







Austria, Belgium, Czechia, Estonia, France, Greece, Germany, Italy, Lithuania, Poland, Portugal, Spain, Slovakia and Turkey.

Open Call News



"Spoiler" (Website news and detailed stats to follow):

2nd Call for Business Experiments – 350 submissions (!), Evaluation ongoing, expect news on proposals selected early in 2026.

Main Participant SMEs from 34 countries.

2nd Call for Innovation Studies:

- Deadline: February 25th, 2026 at 17:00 Brussels local time.
- Expected duration of innovation studies: 10 months, with targeted commencement July 1st, 2026.
- Indicative total funding budget = € 4M.

FFplus_Call-2-Type-2



Second call for innovation studies for the development of generative Al models

- Deadline: February 25th, 2026 at 17:00 Brussels local time
- Expected duration of innovation studies: 10 months, with targeted commencement July 1st, 2026
- The indicative total funding budget for all innovation studies funded under this call is € 4M.





Coordination and Support for National Competence Centres and Centres of Excellence on a European Level Phase 2

Natalie Lewandowski, HLRS

EuroHPC User Days Copenhagen 30.09.2025

CASTIEL 2: the NCC and CoE network



Mission:

Support and connect the NCCs & CoEs

- EuroCC 2 and EuroCC4SEE comprise 33
 National Competence Centres in HPC in Europe
- 14 Centres of Excellence in HPC Applications



What services do the NCCs offer?



- Support users in their respective country in
 - √ High-Performance Computing (HPC)
 - ✓ High-Performance Data Analytics (HPDA)
 - ✓ Artificial Intelligence (AI)*
- Provide services to users from industry, academia and public administration
- Single points of contact for HPC and associated technologies



Services for Users







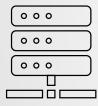
Training and Expertise

- Hands-on training courses and workshops
- Access to expert knowledge in HPC, HPDA, and AI*



Access to services

- National and European-level capabilities
- Tailored support in HPC and related technologies



Access to technology

- Supported access to supercomputers
- Guidance and hands-on help with proposals







HPC+ for everyone

- Services for all levels: beginners to experts
- For users in industry, academia, and public administration

new FF+ call opens December 2025 – February 2026

Advantages







Where to find us?

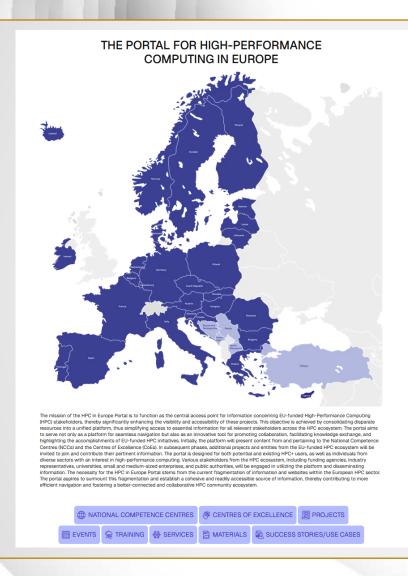






HPC in Europe Portal





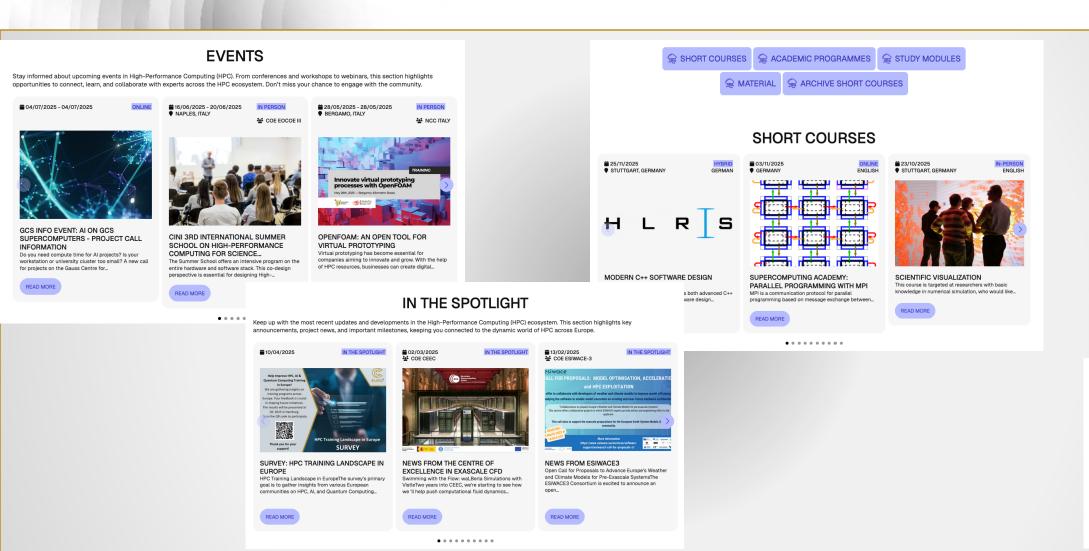
The Portal for High-Performance Computing in Europe

- NCCs
- CoEs
- Information
- Competences
- Training courses
- Events
- Contents
- Documents as results of workshops
- Funding opportunities
- Videos from events and workshops
- •••



Training, News & Events







Codes & Competences

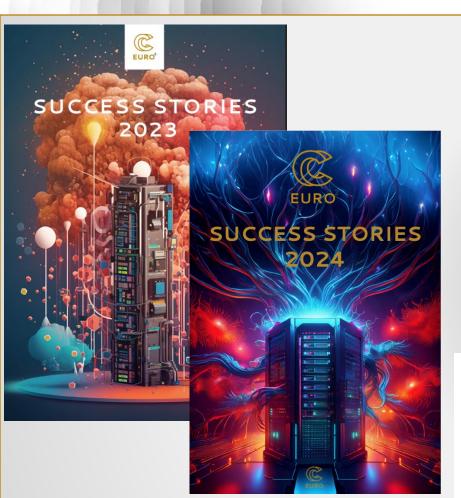


COMPETENCE MAP Changes will be visible when competences are selected. Please see explanations below. ICELAND **FILTERS** EXPERIENCE LEVEL FINLAND Advanced NORWAY Intermediate COMPETENCE Big Data and Artificial Intelligence -Al on HPC -BIG DATA TOOLS IN HPC - MANAG -DATA MANAGEMENT -DATA STORAGE -Machine Learning and/or Deep Lea -ML and DL applications to solve sr UKRAINE -MLOPS TOOLS Building and Deploying Parallel Pro-FRANCE Select/unselect a single or multiple items by holding the str or cmd key and clicking on the item Leaflet | © OpenStreetMap contributors | Tiles © Esri - Esri, DeLorme, NAVTEQ



Success stories

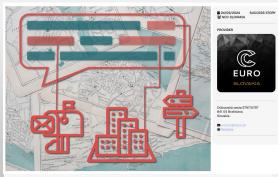






TRANSFER AND OPTIMIZATION OF CFD CALCULATIONS WORKFLOW IN HPC ENVIRONMENT

Shark Aero company designs and manufactures ultralight sport aircrafts with two-seat tandem cockpit. For design development they use popular open-...



NAMED ENTITY RECOGNITION FOR ADDRESS **EXTRACTION IN SPEECH-TO-TEXT** TRANSCRIPTIONS USING SYNTHETIC DATA



DIGITALSMART AND DUNAVNET TO PROVIDE AI EDGE SOLUTION FOR POULTRY INDUSTRY,...

Organisations & Codes Involved: DigitalSmart is a coordinator of a new H2020 project: called AIMHiGH





Predict the Damage to infrastructures caused by storms and map more precisely the risks of claims for insurance

The French NCC: CC-FR, dedicated to HPC, HPDA and Al technologies, brings together the community of technology providers and users. CC-FR federates the HPC, HPDA and Al ecosystem and supports SMEs on the use of intensive computing, high-performance data analysis and artificial intelligence.



Low-latency Al-based Gesture Recognition

NCC-Bulgaria was founded by the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences, the Sofia University "St. Kliment Ohridski" and the University of National and World Economy.



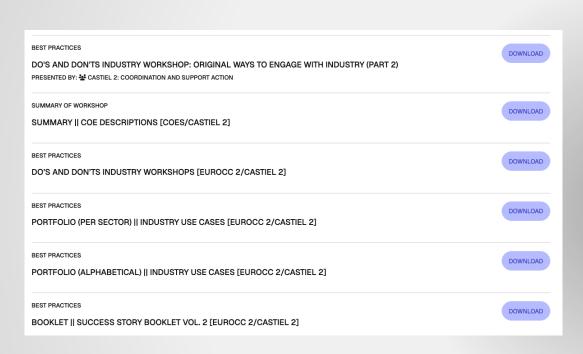
- NCC-Bulgaria is focused on:
- Creating a roadmap for successful work in the field of high-per-
- formance computing, big data analysis and artificial intelligence.

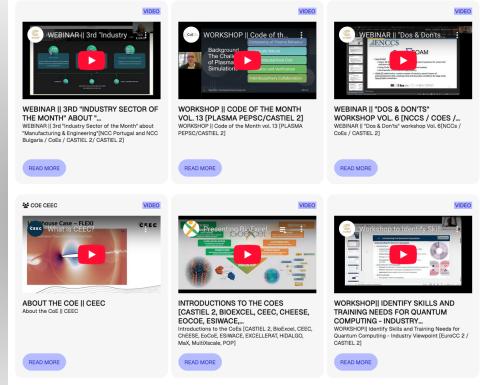
 Analyzing the existing competencies and facilitating the use of HPC/HPDA/AI in Bulgaria
- · Raising awareness and promoting HPC/HPDA/AI use in companies and the public sector.

https://hpc-portal.eu/materials

Use cases, Videos, Tutorials, Best-Practice Guides









Get in touch with your NCC



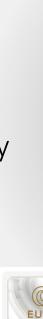
Ask them for support on:

- training
- access to the FuroHPC machines
- access to HPC knowledge & expertise

 utilising HPC in the best way possible

hpc-

portal.eu/nccs







BELGIUM



CCFR

NCC BOSNIA & HERZEGOVINA

NCC HPC



EURO

GCS

EURO

BULGARIA



EUROCC ITALY MPC Competence Center



C

EURO

SuperS



EURO

LIETUVA





















EURO

FINLAND







NARODOWE CENTRUM KOMPETENCJI HPC

NCC POLAND

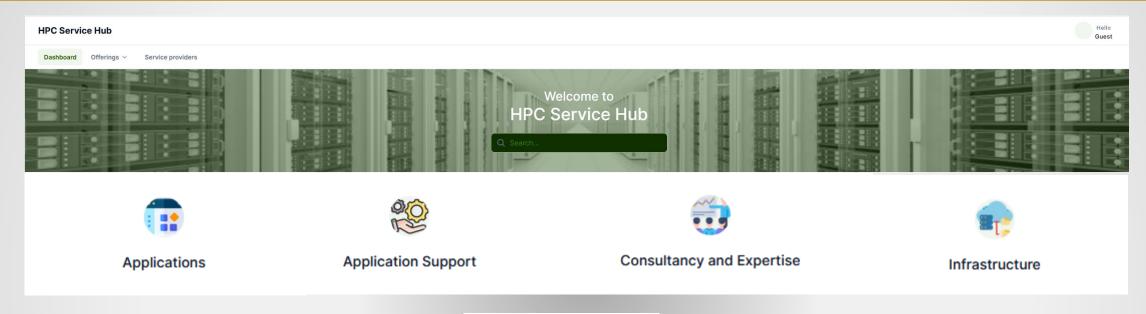






Find all the services: HPC Service Hub







Supercomputing in Europe Podcast











Spotify: https://lnkd.in/ewiUzxUE

Apple podcasts: https://lnkd.in/enRtbWGa

and many more episodes



Thank you!



Dr. Natalie Lewandowski Head, Business & Project Management

High-Performance Computing Center Stuttgart (HLRS)

Email: natalie.lewandowski@hlrs.de

Web: www.hlrs.de





CASTIEL 2 has has received funding from the European High-Performance Computing Joint Undertaking (JU) under grant agreement No 101102047. The JU receives support from the European Union's Digital Europe Programme and Germany, Italy, Spain, France, Belgium, Austria, Estonia.

EuroCC 2 and EuroCC4SEE have received funding from the European High Performance Computing Joint Undertaking (JU) and Germany, Bulgaria, Austria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Greece, Hungary, Ireland, Italy, Lithuania, Latvia, Poland, Portugal, Romania, Slovenia, Spain, Sweden, France, Netherlands, Belgium, Luxembourg, Slovakia, Norway, Türkiye, Republic of North Macedonia, Iceland, Montenegro, Serbia, Bosnia and Herzegovina under grant agreement No 101101903 and No 101191697.



Services for EuroHPC Users

EuroHPC User Days, 30 Sep 2025

Janne Ignatius, CSC Coordinator of EPICURE Project





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2nd Level Support

Code Porting, Enabling and Scaling

Work limited to 1-2 months with focus in compilation improvements, vectorization and scalability analysis



3rd Level Support

Code Optimization

Handling large-scale workloads with durations of 2 to 6 months, focused on performance improvements that require code modifications, such as inter-node optimizations, GPU porting and scalability improvements

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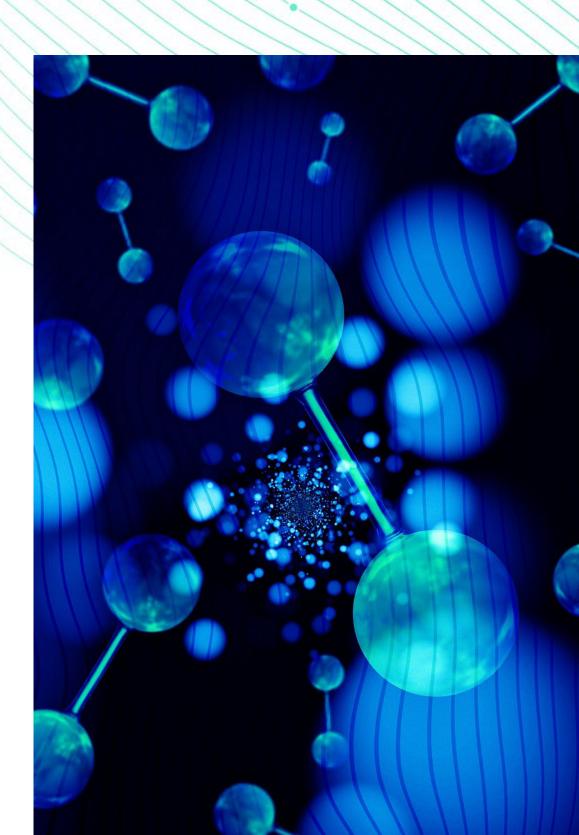
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15/04/2025

Exploring ARM in HPC: Highlights from the FDICLIDE



21/11/2024

Unlocking European-level **HPC Support**



EPICURE: Empowering

Optimised HPC

READ MORE

European Researchers with

21/05/2025

25/06/2025

EPICURE Project

READ MORE

Showcased at ISC 2025 -

Europe's Leading HPC...

OUR MISSION

The EuroHPC Application Support Project EPICURE draws on the experience and knowledge of the current and future EuroHPC supercomputer hosting organisations to provide users with Level 2 and Level 3 support services, with a more technical component than previously available, over a period of 3 to 18

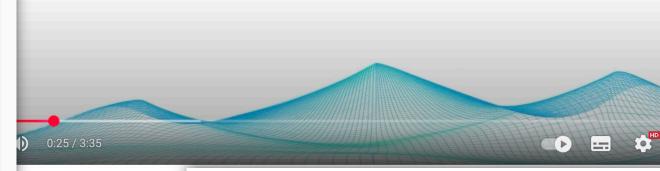
Services provided by the EPICURE include code activation and scaling, performance analysis and benchmarking, code refactoring and code

In order to promote the exchange of knowledge, the project will also organize architecture specific trainings, hackathons, webinars and workshops in several

ABOUT US

TESTIMONIALS FROM

OUR APPLICATION SUPPORT TEAMS



Application Support

EPICURE's Webinars

EPICURE Project - 1/5





Webinar | Unlocking Exascale: A First **Look at JUPITER**

EPICURE Project



Webinar EPICURE | Building Software With Ease: an Introduction to EasyBuild

EPICURE Project



Webinar EPICURE | Streaming Optimised Scientific Software: an...

EPICURE Project

Webinar EPICURE: Heterogeneous computing with SYCL and oneAPI on... 1:37:21

EPICURE Project

EPICURE Webinar: Scientific Visualisation at the Argonne Leadershi...

Performance Analysis HPC code profiling and identification of areas of the code that need optimization in order to achieve maximum performance. 0:27 / 2:04

02/04/2025

EPICURE highlights HPC support services at EuroHPC Summit 2025

READ MORE

Who's eligible?

Having a EuroHPC JU allocation project is **required!**

Don't have one yet? We can even help you to apply!



Ready to optimise?

Request support: You can request EPICURE support.

https://pm.epicure-hpc.eu/ -- http://eurohpcsupport.eu/

Do you **need a EuroHPC allocation?** Check the EuroHPC Access Calls!

https://www.eurohpc-ju.europa.eu/supercomputers/

supercomputers-access-calls_en







Thank you!



pmo-epicure@postit.csc.fi

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Follow us









L U M I Al Factory

User interaction for data-driven discovery and innovation

Dr. Pekka Manninen
Director, LUMI AI Factory
CSC - IT Center for Science, Finland

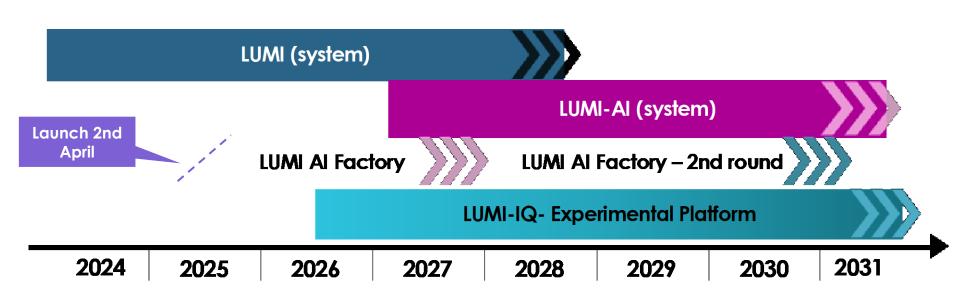
LUMI AI Factory



- Largest of the EuroHPC Al Factory investments (612 M€ total budget)
- The three pillars of LUMI AI Factory
 - Al-optimised supercomputer LUMI-AI
 - Al Factory Service Center
 - Experimental quantum-computing platform LUMI-IQ
- CSC (Finland) coordinates consortium with participation from Czechia, Denmark, Estonia, Norway and Poland

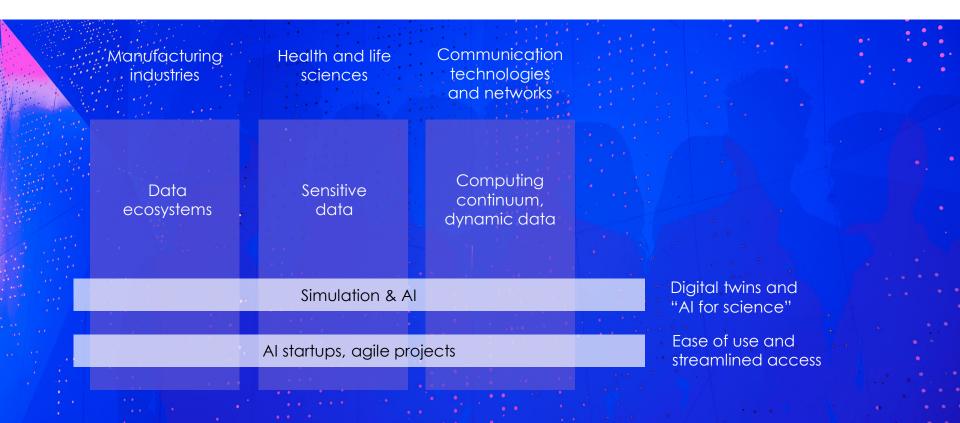
LUMI AI Factory timeline





Key industrial sectors and focus areas





Services: **COMPUTE**





Computing capacity never seen before

- Globally leading AI training with massive GPU capacity and fast & large data storage (shared & dedicated)
- Al model serving at scale for "every open model out there"
- Customisable environments with virtual clusters to match every need
- API-based access and recipes for automation and public cloud integration
- Quantum capacity for next-level QC-Al



Expert support all the way

- Friendly human support for getting started and all the way to deep AI methods and scalability
- Accelerated adoption with self-service environment, thorough documentation and Al assistants
- Supported MLOps environment and recipes

Services: **DATA**





Data access is the priority

- Make data manageable with cloud-like data environment
- Datasets-as-a-Service: previously unaccessible datasets made available
- Remove data access barries with sensitive data services and access authorisation mechanisms
- Direct connections to data spaces and data repositories



Data support that goes the extra mile

- Data team for sourcing, negotiating and curating high-value datasets
- Help with the necessities: data wrangling & data engineering
- Support streaming data into the supercomputer

Services: TALENT





Training the latest skills & technology

- Co-create with AI centers
- Provide structured training paths for Al and HPC
- Tailor training for different domains



Consultation with company focus

- Remove friction with starter pack & feasibility analysis
- Weave Al Factory into existing networks and ecosystems



Focus on Al adoption

- Offer time-limited interventions to step up Al adoption in companies' RDI
- Long-term access to the platform, support and training
- Support in applying for large resources & providing fast lanes



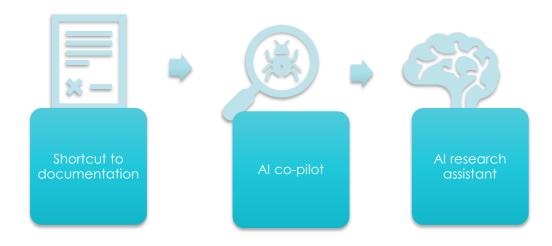
Al Factory Hub: engage the next-generation talent

- Co-working hub on grounds of Aalto University & ELLIS Institute
- Network of satellite hubs & virtual co-working space
- Running & supporting hackathons, challenges and accelerators

Lumia, Lumi's Al assistant

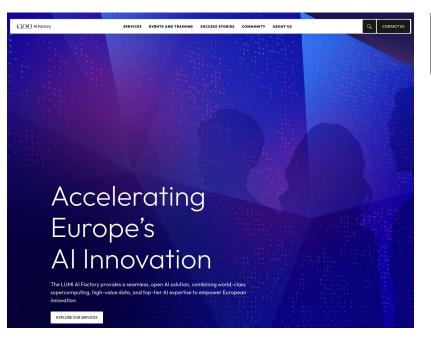


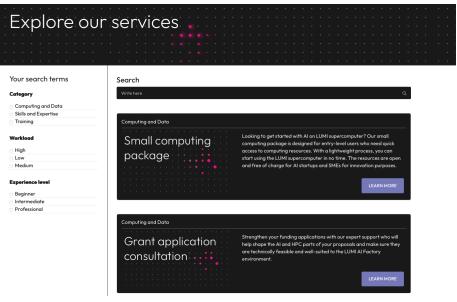
- An LLM-based Al assistant to help users in using a supercomputer system
- Replacing and complementing support received from traditional sources like user documentation, helpdesk and expert consultation, to increase researcher's productivity



Go explore our service catalogue | umi-ai-factory.eu

You can register for trainings and events, and access services for computing, data, consultation - and much more.









Bastian Koller, Coordinator of HammerHAI, koller@hlrs.de

The German AI Factory for Industry and Science, HammerHAI, supports start-ups, SMEs, industrial companies and scientific institutions with state-of-the-art AI solutions for technology, manufacturing and global challenges, thereby promoting innovation, economic growth and transformative progress throughout Europe.









Germanys first AI Factory with industrial focus

HLRIS

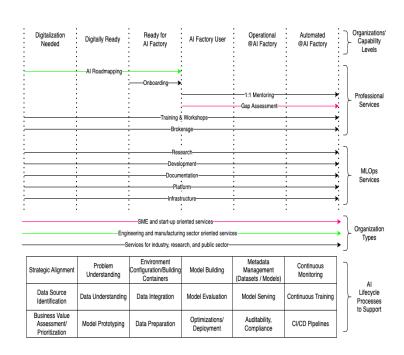
- Focus on start-ups, SMEs, industry, science and the public sector
 - Thematic focus: engineering, manufacturing, global challenges...
- Based on experiences of the partners
 - Currently more than 70 customers using systems for production
 - Porsche, Trumpf, Festo, ...
 - ISO 27001 and TISAX Level 3 certification
 - Established ecosystem for industrial but also science enquiries



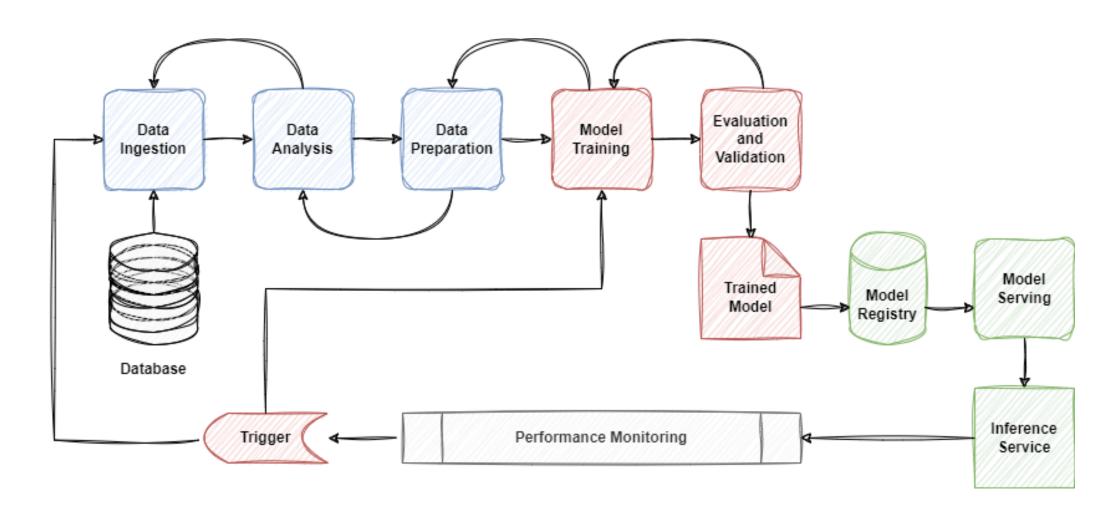
Focus



- Fine-tuning pre-trained models with initially moderate resource requirements, which will increase continuously in the following years.
- Querying an AI model in production (inference in production)
- Providing a secure environment for training and inference
- Supporting easy migration of existing (cloud) workloads to HammerHAI
- Executing containerised applications
- Easy access to data and computing resources
 - Tailored support for users, especially when onboarding companies
 - · A software ecosystem and job submission similar to that in the cloud are essential



Support of the overall AI Lifecycle



Current status



- Services/Support:
 - In operation since April 2025
 - For the moment use of existing ressources of the partners
- HammerHAI Al-Optimised Supercomputer:
 - Currently under procurement
 - Operational the latest Q2 2026





Thank you!

Bastian Koller, Coordinator of HammerHAI

koller@hlrs.de

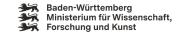
linkedin.com/company/hammerhai hammerhai-eu.bsky.social

This project has received funding from the European High Performance Joint Undertaking under grant agreement No. 101234027. This project is co-funded by the European Commission, the German Federal Ministry of Research, Technology and Space (BMFTR), the Baden-Württemberg Ministry of Science, Research and the Arts, the Bavarian State Ministry of Science and the Arts and the Lower Saxony Ministry of Science and Culture.























« Al Factory France a one stop-shop to foster the use of Al in science, industry and public services »







ad astra per aspera

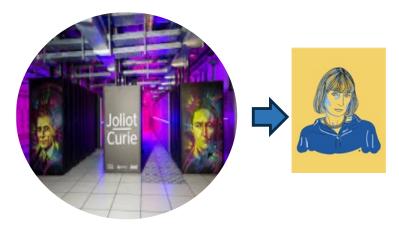


GENCI, A FRENCH HPC RESEARCH INFRASTRUCTURE

Serving yearly 2200 research projects in HPC and AI (academia, industry)







TGCC/CEA - Ile de France

- Hosting Site for the 2nd Exascale system (EuroHPC) called Alice Recoque end of 2026
- Hosting Site for the 1st hybrid HPC
 + Quantum computing
 infrastructure (HQI, HPCQS, EuroQCS-France)











IDRIS/CNRS - Ile de France

- 1st □ converged HPC/AI system (#AIForHumanity)
- Bring sovereign computing facilities / services to AI research community
- > 3800 GPUs in 2025

CINES/FU - Montpellier

 > 90 PF with AMD next gen GPUs (>1500) & CPUs (>100k)

>1400 Al projects in 2024
3 keys of success -> GPUs, user support and access modes



AI FACTORY FRANCE

In a nushell

PostGenAl@Paris

DATAIA

ANITI

Hi!PARIS









□ 30,7M€, 3 yrs, 20 partners from academia & innovation

ENACT

PRAIRIE

Seguoia

Institut 3IA Côt d'Azur

MIAI















de Strasbourg











STATION F









- To provide to the AI community a one-stop-shop of tailored AI services through a distributed presence across all the country and beyond
- Support and promote open-source EU foundational models and intensify efforts in domain-specific specialisation for widening the use of AI in industry, science and public services
- Foster a close collaboration between research and industry, increasing tech transfer, develop public / private continuum of facilities/services, startup creation as well as to attract and retain skills with **new** career paths
- Invest massively in talent detection, education and permanent (re)training
- Serve the full Al landscape, GenAl but also ML, Agentic Al, symbolic and explainable Al
- ☐ More than 40 letters of support including













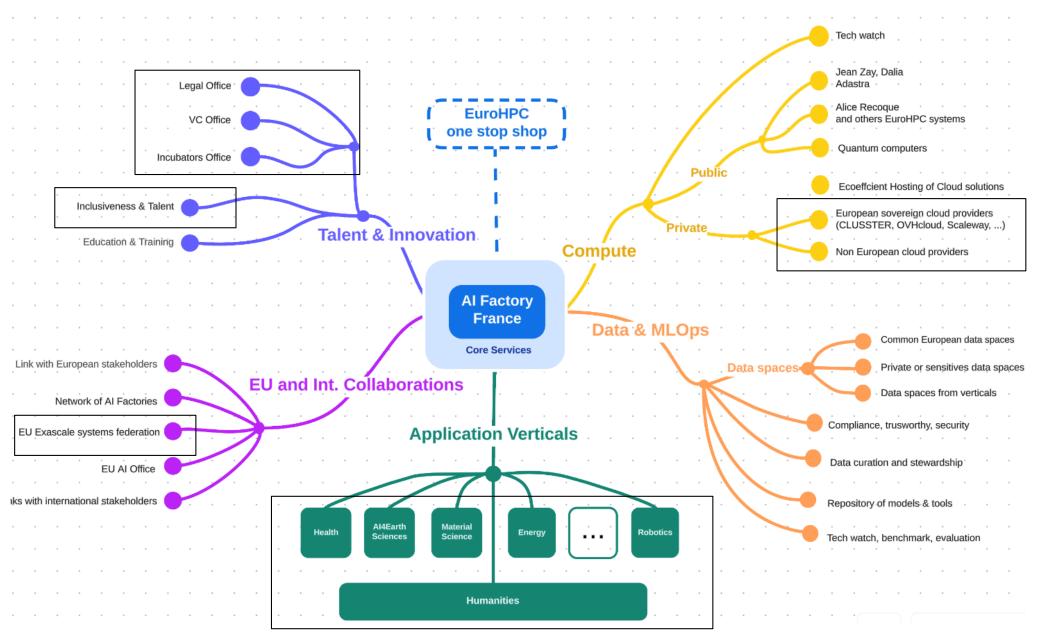




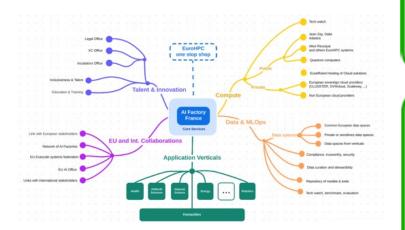




Al Factory France value proposal







13 Application verticals

Each vertical has several public/ private demonstrators

Robotics & Intelligent Systems

Focus

- Exploitation of sectoral data
- Human-motion generator for Alpowered robotics
- Frugal Al solutions

Outputs

- Human-motion generator solution
- Robotics specific training & hackathlon

Health

Focus

- Al at the hospital.
- Personalized medicine
 Al for genomics
- Radiology image analysis
- Neuroscience

Outputs

- Demonstrators for the 5 focus areas
- Health data sets with associated services

Earth Observation and Environmental

sciences

....

- LLMs for data quality
 Pilots on climats,
- water, ocean, forest
 Digital Twin of the French Territory

Outputs

Focus

- High quality data sets
- Multi-domain interoperability and cross analysis
- Demonstrators

Material science

Focus

- All models for atomic scale simulation
- Materials for sustainable industry
- Robust material science data spaces

Outputs

- · Al models; data sets
- Machine-learning interatomic-potential demonstrator

Mobility

Focus

- Autonomous driving
- Monitoring mobility and analysis its impact
- Logistic

Outputs

- Demonstrators for each focused area
- Open data-sets and models

Defense

Focus

- Security of generative Al
- Transparency of GenAl models

Outputs

- Defense data sets
- Hackathlon and trainings

Energy and Sustainable development

Focus

- Grid operation
- Predictive maintenance
- Reduction of CO2
- Geoscience

Outputs

- Demonstrators for grid operation and maintenance
- Energy systems management platform
- Geoscience tools

Digital continuum

Focus

- Real-Time Cyber Physical System
- Large science instruments (telescope, LHC)

Outputs

- Pilot for Adaptative Optics
- Federation of expert pools
- SDK for Al powered RT-CPS

Aerospace

Focus

- Accelerate the design of future aerospace systems
- Decrease energy consumption of physical modeling and simulation

Outputs

- Novel Al-powered design tools for serospace
- Al and simulation software/algorithms

Edtech

Focus

 Edtech solutions for Higher Education and Research

Outputs

Co-construction space to design Edtech solutions

Sustainable agriculture

Focus

- Yield optimisation
- Food quality and safety
- Circular economy

Outputs

- Collaborative platform
- Pilots
- Dedicated models for agriculture

Finance

Focus

- Financial risk management
- Trustable AI in finance

Outputs

- Demonstrators for Financial risk management
- Trustable LLMs for finance

Humanities

Focus: LLMs ALT-EDIC collaboration; access to research data; Software heritage

Outputs: Development of European LLMs; tools for research data access; infrastructure for code heritage

EuroHPC User Forum

and Coordination Group

Chris Richardson (cnr12@cam.ac.uk)

October 2025

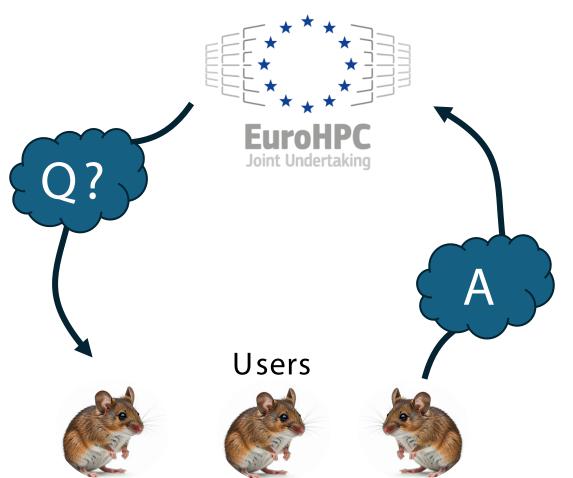
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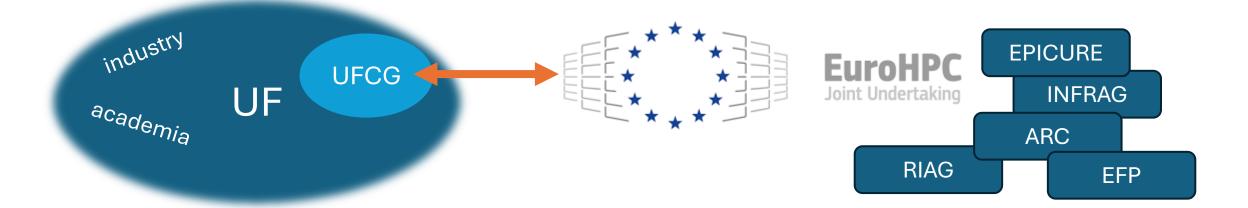
EuroHPC User Forum- aims



- The aim of the User Forum is to foster structured, coherent, and regular communication and exchange with all user communities and stakeholders.
- The User Forum facilitates open consultation with user and scientific communities that also serves to highlight the EuroHPC vision.
- The User Forum has administrative support from the JU
- The JU has oversight of the Forum's activities and collates and communicates feedback on user requirements to the Advisory Groups of EuroHPC as necessary;
- See the EuroHPC MASP online!

EuroHPC User Forum & Coordination Group in practice

- UFCG Monthly meeting on Teams including some EuroHPC staff
- Independent a group of Users
- Limited term keep fresh with new members
- Slack and discourse channels (see later)
- Two-way communication from users to EuroHPC
- Connection to RIAG/INFRAG/EPICURE
- Provide feedback to documents and reports from EuroHPC JU



Future Activities

- Online webinars with EuroHPC groups (e.g. 1 hour):
 - EPICURE (how to improve your software)
 - ARC (proposal review process)
 - Network infrastructure
 - EFP (federated access to systems)
 - Another topic of your choice... tell us!
- Gauging user opinion: feedback
 - online discussion on slack: ask your question for EuroHPC.
 - adding content to Discourse

Who is in the Coordination Group?



Chris Richardson (chair) Cambridge UK, Physics/Engineering finite element software development



Maria Girone (vice chair) High Energy Physics, CERN, Switzerland, Head of CERN openlab



Andrius Popovas (University of Oslo, Norway) HPC users for computational astrophysics



Ivan Carnimeo (CNR-IOM, Italy): Materials science/Chemistry/Physics developer of Quantum ESPRESSO



Thomas Geenen (ECMWF, Italy, Destination Earth) - Climate and Weather Prediction and Earth System Digital Twin communities



Lara Peeters (VSC - HPC in Flanders, Belgium) - Digital Humanities



Sinéad Ryan (Trinity College Dublin, Ireland) – Lattice Quantum Chromodynamics



Zoe Cournia - Biomolecular simulations and drug discovery Academy of Athens, Greece



Matthias Meinke - Institute of Aerodynamics RWTH Aachen, Germany

Electing new members of UFCG

 "Members of the UFCG should be geographically distributed and cover wide range of disciplines as well as strive for gender balance. They should also represent different types of experience in applications related to HPC, Quantum and AI computing."

Nominations: put yourself forward



Join in.





- https://eurohpc-users.discourse.group/signup
- Forum discussion
- Archived as a longer-lasting source of information



- Informal "chat" application
- Help to start conversations
- Not a "high security" platform

Code of Conduct (draft)

- <u>Maintain professionalism in all interactions</u>—whether in-person at conferences/workshops, related social events, or in virtual and social media spaces.
- Respect others by avoiding offensive comments or behaviors, including harassment, intimidation, or exclusionary remarks based on gender identity, sexual orientation, disability, physical appearance, race, nationality, religion, or any other personal characteristic.
- <u>Engage in constructive scientific discussions</u> without personal attacks, insults, or belittling remarks. Critical feedback should be professional and focused on ideas rather than individuals.
- Respect privacy when sharing content. If recording online talks or posting speaker photos on social media, obtain permission beforehand. Content from presentations may be shared unless the speaker has requested otherwise.

This morning's panel sessions



Governance

Chair: Sinéad Ryan



User Experience

Chair: Thomas Geenen

And later... meet us all at lunchtime (13:00-14:00)