

# ▶ AI Factories: from EU Strategy to Practice



▶ **ENDORSE**

THE EUROPEAN DATA CONFERENCE ON REFERENCE DATA AND SEMANTICS

# The EuroHPC Joint Undertaking 2021-2027

- EU body and funding entity, established in 2018, based in Luxembourg
- Governed by a Board composed of the EC, 38 Participating States, and 3 Private Members
- Mission:
  - Acquire, deploy and maintain a HPC and quantum Infrastructure in Europe
  - Fund R&I projects to develop HPC applications, software and hardware and foster a European supply chain
  - Provide access to HPC and quantum users across Europe and support the development of skills
  - Develop and operate AI Factories to support the growth of a competitive and innovative AI ecosystem in Europe



## #EuroHPC Joint Undertaking

The European High Performance Computing Joint Undertaking (EuroHPC JU) pools together resources of the European Union (EU), European countries and private partners to develop a world class supercomputing ecosystem in Europe, boosting European competitiveness, innovation and improving European citizens' quality of life.

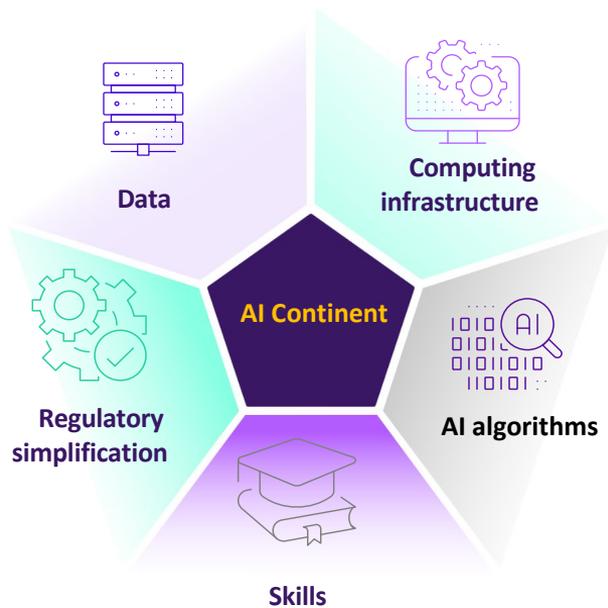
Member countries are Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom.



**EuroHPC**  
Joint Undertaking

# The AI Continent Action plan

<https://digital-strategy.ec.europa.eu/en/library/ai-continent-action-plan>



## AI Gigafactories

- AI strategic infrastructure investment
- Massive scale
- Novel public-private partnership model
- Ensuring EU sovereignty



# AI Factories

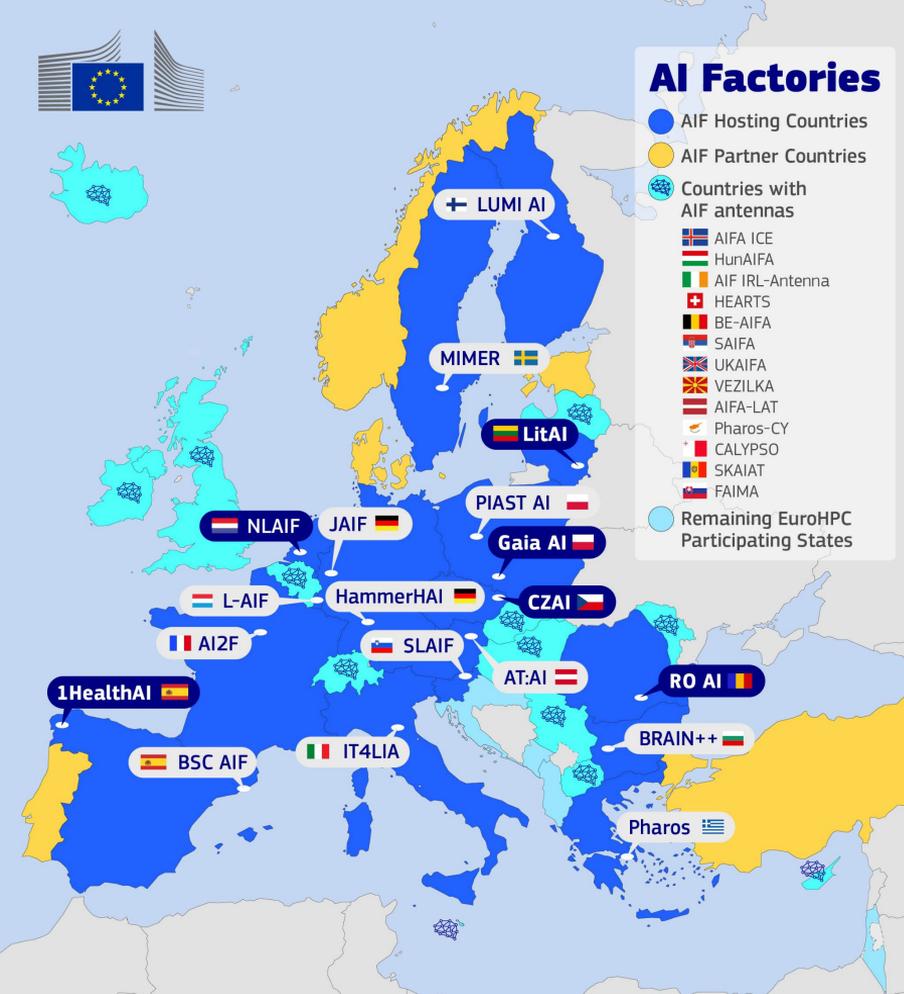
● AIF Hosting Countries

● AIF Partner Countries

⊕ Countries with AIF antennas

- AIFA ICE
- HunAIFA
- AIF IRL-Antenna
- HEARTS
- BE-AIFA
- SAIFA
- UKAIFA
- VEZILKA
- AIFA-LAT
- Pharos-CY
- CALYPSO
- SKAIAT
- FAIMA

● Remaining EuroHPC Participating States



## Europe advances the AI Continent with AI Factories and AI Factory Antennas

- **19 selected AI Factories + 13 AI Factory Antennas**, spanning MS, EuroHPC Participating States, and associated countries
- Deployment of a large pan-European infrastructure and service layer
- **15 new AI-optimised supercomputers** plus one major upgrade
- **AI computing capacity in Europe to increase fivefold**
- AI Factories and AI Factory Antennas have mobilised €2.6 billion for European AI excellence anchoring a sovereign, world-class AI and HPC ecosystem.
- **Interconnected AI Factories and Antennas** will operate as a federated network ensuring seamless collaboration, efficient resource sharing, and secure cross-border access, advancing **Europe's strategic autonomy in critical digital capabilities**

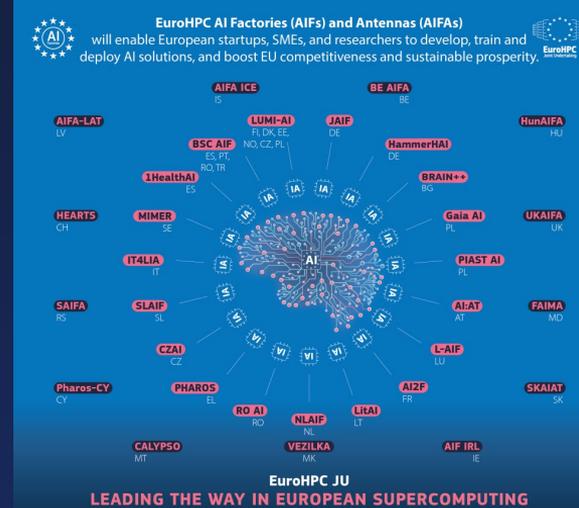
Switzerland's participation is contingent upon the ratification of its accession to Horizon Europe.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union. This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

Administrative boundaries: © EuroGeographics © OpenStreetMap  
Cartography: Eurostat - IMAGE, 05/2025

# AI Factories

- **Dynamic ecosystems, including AI-optimised supercomputers, data capacities, programming and training facilities, and human capital to support the EU AI industrial and research ecosystems in developing large AI models and applications.**
- **Novel approach to AI innovation based on a network of public supercomputers providing an open environment to AI developers.**
- **AIFs & AIF Antennas gradually operational in 2026.**
- **Strategic sectors:** Health/Life Science; Manufacturing; Climate/Environment; Space; Finance; Cybersecurity; Agri-tech/Agrifood; Education/Arts/Culture; and more.
- **Largest AIFs around 25 000 advanced AI processors.**



## AI-ready EuroHPC supercomputers in:

- Germany **JAIF – JUPITER**
- France **AI2F – Alice Recoque**
- Greece **Pharos – Daedalus**

## AI-upgrades to EuroHPC supercomputers in:

- Spain **BSC AIF – MareNostrum 5**

## New AI-optimized EuroHPC supercomputers in:

- Finland **LUMI-AIF**
- Germany **HammerHAI**
- Italy **IT4ALIA**
- Luxembourg **L-AIF**
- Sweden **MIMER**
- Bulgaria **BRAIN++**
- Slovenia **SLAIF**
- Austria **AI:AT**
- Poland **PIAST AIF | GAIA AI**
- Spain **1HealthAI**
- Romania **ROAI**
- Czechia **CZAI**
- Lithuania **LitAI**
- Netherlands **NLAIF**

# AI Factories



# AI Factory Ecosystem

## EU strategy on AI Factories

- ❑ AI supercomputers
- ❑ Dedicated HPC/AI services
- ❑ Application support
- ❑ Access policy
- ❑ Data services - Data Labs
- ❑ Support to AI EDIC (ALT-EDIC)
- ❑ Talent and skills
- ❑ Networking
- ❑ Collaboration with AI Office

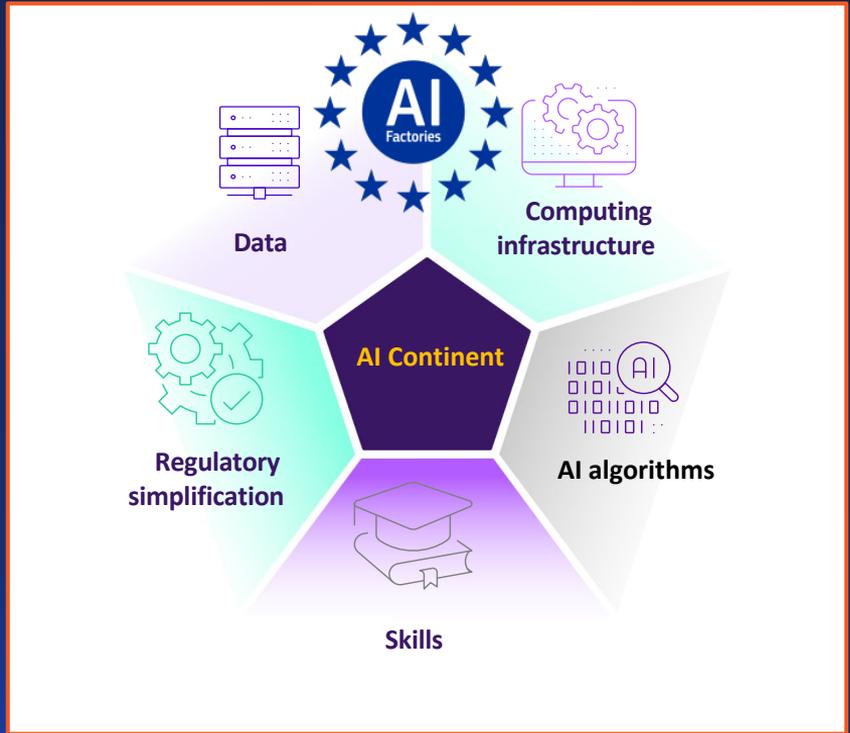


## National strategy on AI Factories

- ❑ AI supercomputer
- ❑ Data facilities
- ❑ Access to data
- ❑ Dedicated services
- ❑ Talent and skills
- ❑ Cooperation with Universities
- ❑ Local GPU clusters
- ❑ Digital Innovation Hubs
- ❑ Start-ups/scale-ups

# Europe is Building a Data Union

- European strategy for data
- Trusted data sharing
- EU Data Act
- EU Artificial Intelligence Act
- Common European Data Spaces
- Sovereignty: data residency



# AIF Data Labs

- Data Labs create the link between data holders, Common European Data Spaces, domain-specific data ecosystems, and AIFs.
- The first Data Labs will be piloted within **AI Factories**. The EU also envisages standalone sectoral Data Labs.
- Each Data Lab will offer a consistent set of services, including data discovery, standardisation, cleaning, enrichment, synthetic data generation, guidance on data governance and compliance.
- Data Labs will be implemented across a set of priority sectors aligned with those identified by the Apply AI Strategy: **healthcare and life sciences, manufacturing and robotics, public administration, cybersecurity and internal security, culture and languages, scientific research, and climate and environmental modelling.**

- **AIF Data Labs network**
- **Simpl** integration
- Ensure that AI developers can seamlessly use **datasets and tools**
- Enable efficient data use **across sectors and borders**
- Ensure **regulatory and technical alignment**
- Promote the **exchange and reuse** of shared tools and resources
- Develop required **legal and regulatory** compliance services

# The Gateway to AI Factories

## AI Factories

AI Factories: computing power and customised support services for free!

Expanding and scaling business innovation for SMEs and Startups.

The European Union has established 13 new AI Factories that offer free, customised support to SMEs and Startups.



[Apply for Access to AI Factories](#)

[Support and Training for Access](#)

[Contact us via email](#)

[Consult an expert](#)

[Find more information on the Revised Access Policy of the EuroHPC Joint Undertaking](#)



### AI Factories

 <b>Finland</b> Countries: Denmark, Estonia, Norway, and Poland Activities: Software, Services and Subcontracting	 <b>Luxembourg</b> Activities: research	 <b>Italy</b> Activities: Subcontract, Service	 <b>Sweden</b> Activities: Subcontract
 <b>Germany</b> Activities: Software, Hardware, Services, Subcontracting	 <b>Spain</b> Activities: Software and Services	 <b>Greece</b> Activities: Cloud, Mobile, Health, Monitoring and Service	 <b>France</b> Activities: research
 <b>Slovenia</b>	 <b>Bulgaria</b>	 <b>Austria</b> Activities: Software	 <b>Poland</b>

### New AI Factories

 <b>Czechia</b> The Czech AI Factory (CZAI) will support the development and adoption of AI in Czechia.	 <b>Lithuania</b> Lithuanian AI Factory aims to transform Lithuanian HPC capabilities into a technology of applied infrastructure that can meet the needs of national and European institutions.	 <b>Netherlands</b> The NL-AIF will be a nationally funded, Europe-oriented project that aims to bridge the gap between AI research breakthroughs and their most significant applications in the Netherlands and Europe.
 <b>Spain - iHealth-AI</b> The Spanish iHealthAI (iHealth AI Factory) aims to produce European iHealth products, services, research, and the broader economy entering global markets.	 <b>Poland - Gaia AI Factory</b> The Gaia AI Factory project aims to accelerate the development and increase the adoption of cutting-edge AI technologies in Poland.	 <b>Romania</b> The RO-AIFactory aims to transform SMEs from passive technology recipients into active AI innovators by providing services, training, and infrastructural access.

Tailored access modes have been put in place by the EuroHPC JU to prioritise AI innovators –startups, scaleups, SMEs– ensuring streamlined fast access to computing resources with minimal administrative overhead.

# Access to EuroHPC Infrastructure

## Traditional HPC access modes

## AI access modes

### BENCHMARK

### DEVELOPMENT

### REGULAR

### EXTREME SCALE

### SCIENCE

### INDUSTRIAL INNOVATION

For scaling tests & benchmarks

For code and algorithm development

For projects that require large-scale HPC resources

For high-impact, high-gain projects that require extremely large-scale HPC resources

For **scientific projects** intending to perform artificial intelligence and data-intensive activities

- **PLAYGROUND**

Fixed amount of allocation for 2 or 3 months

Fixed amount of allocation for 6 or 12 months

Allocation duration: for 12 months

Allocation duration: for 12 months

Fixed allocation for 12 months on first-in / first-served basis

- **FAST LANE**

Continuously open with monthly cut-offs

Continuously open with monthly cut-offs

Continuously open with 2 cut-offs per year

Continuously open with 2 cut-offs per year

Bimonthly cut-offs

- **LARGE SCALE**

Results and access to system: 2 weeks from cut-off date

Results and access to system: 2 weeks from cut-off date

Peer-review process duration: 4 months

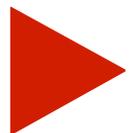
Peer review process duration: 6 months

Peer-review process duration: 1 month

SELECTION: AIF Industrial Innovation Group

# AI Gigafactories

- Building on the concept of AI Factories, taking it to the next level by **integrating coherently** massive computing power.
- Large-scale facilities designed to **develop, train, and deploy the next generation most complex AI models at an unprecedented scale** (e.g., hundreds of trillions of parameters).
- Targeting several across Europe.
- Essential for Europe to be able to **compete on the global level** and ensure its **strategic autonomy in science and in critical industrial sectors**.
- Focus on **power capacity, supply chain, cutting-edge networks, energy-efficiency, and AI-driven automation**.
- Need for **public-private partnerships** given the magnitude of the required investments.



Thank you



European  
Commission



Publications Office  
of the European Union

interoperable  
europe