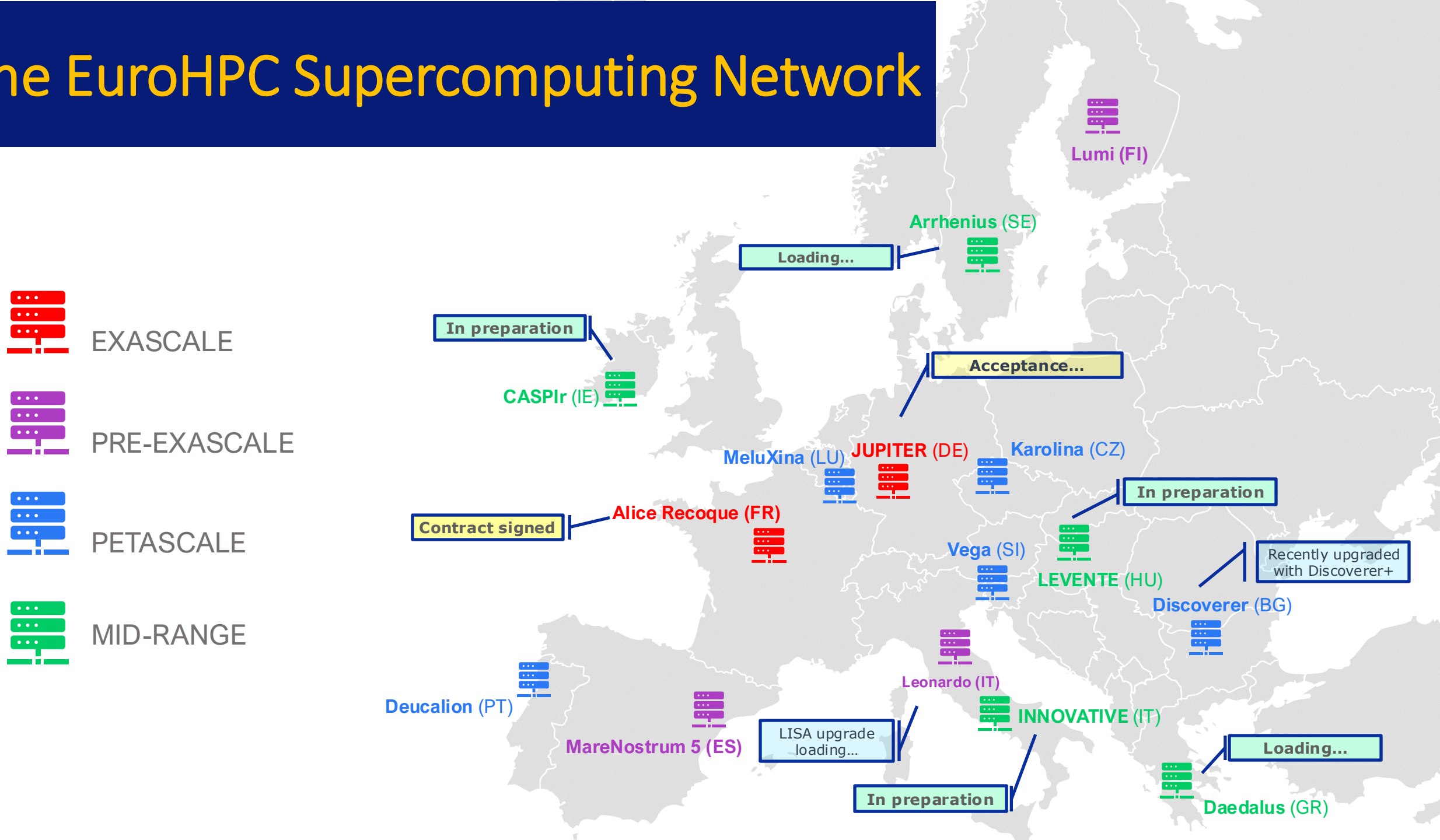

High-Performance Computing
AI Factories/AI Gigafactories
March 2026
European Commission

The EuroHPC Joint Undertaking 2021-2027

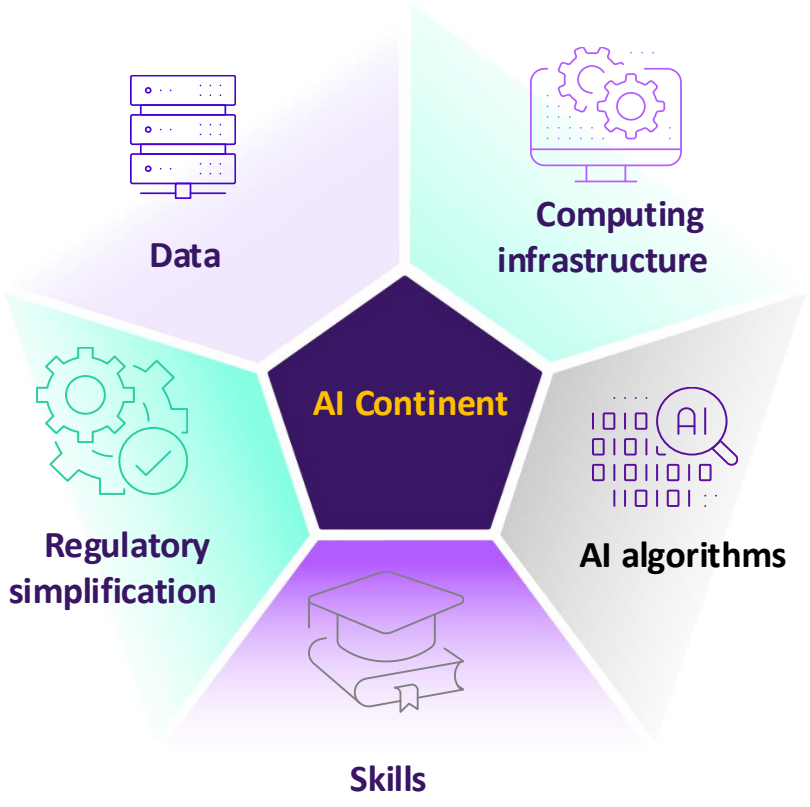
- EU body and funding entity, established in 2018, based in Luxembourg
- Governed by a Board composed of the EC, 37 Participating States, and 3 Private Members
- Mission:
  - Acquire, deploy and maintain a HPC and quantum Infrastructure in Europe
  - Fund R&I projects to develop HPC applications, software 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

The EuroHPC Supercomputing Network



The AI Continent Action plan

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



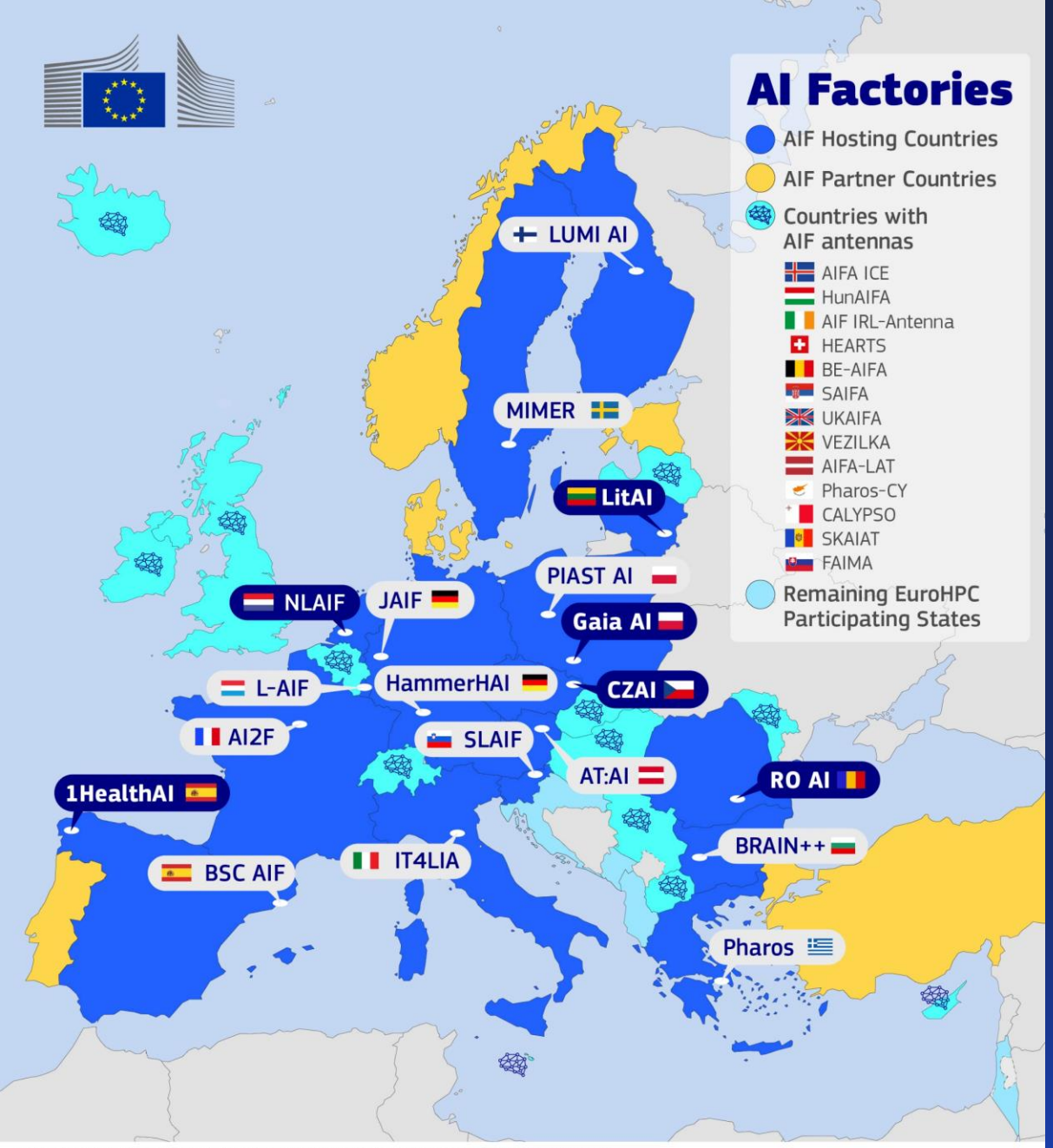
Von der Leyen's Vision

Up to 5 AIGFs to supercharge Europe's AI approach through strategic infrastructure investment

Ensuring EU Sovereignty

Cornerstone Infrastructure

Novel Partnership Model



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

European Commission

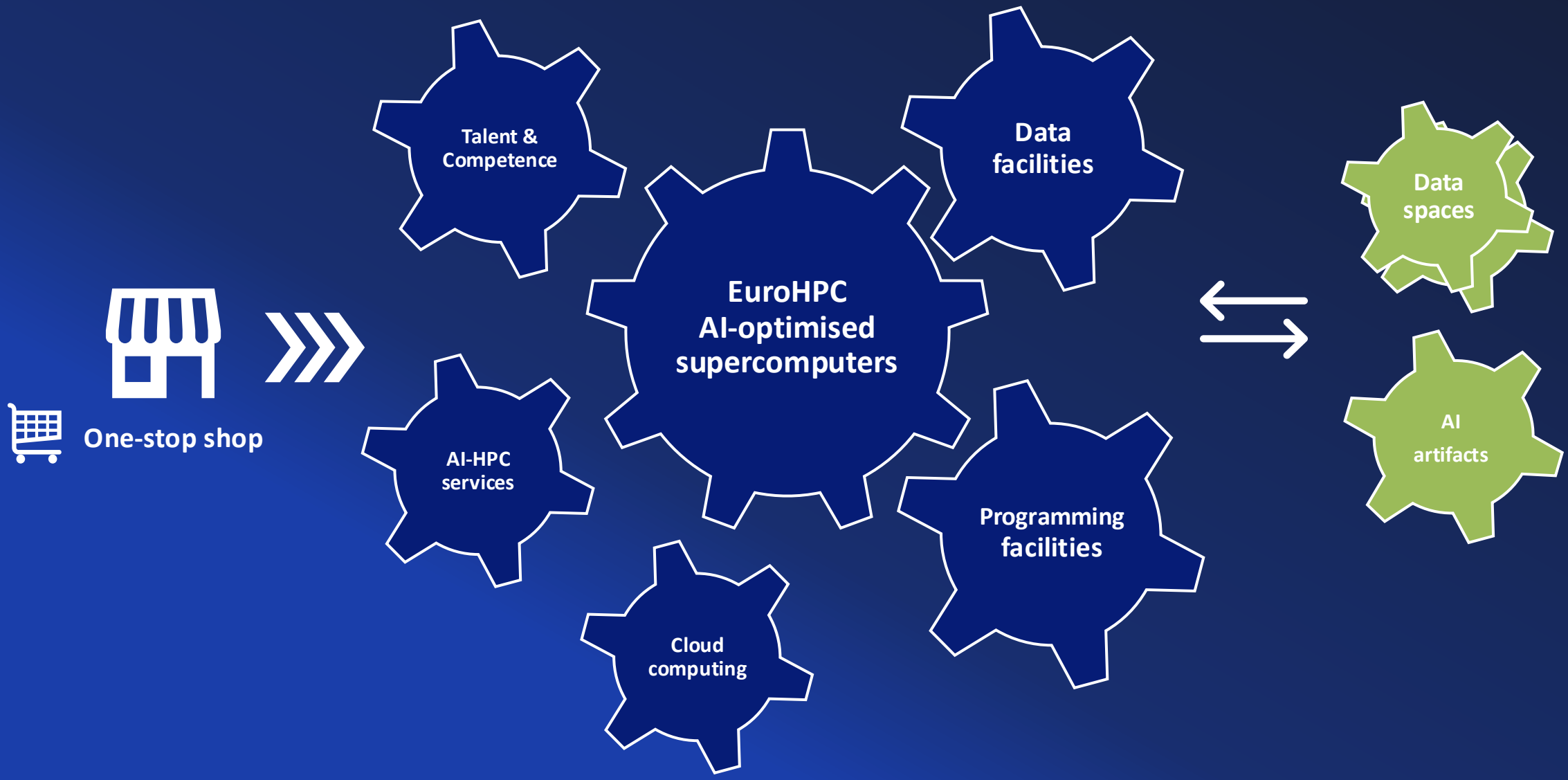
Europe advances the AI Continent with new AI Factories and AI Factory Antennas

- **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 Antennae** 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**

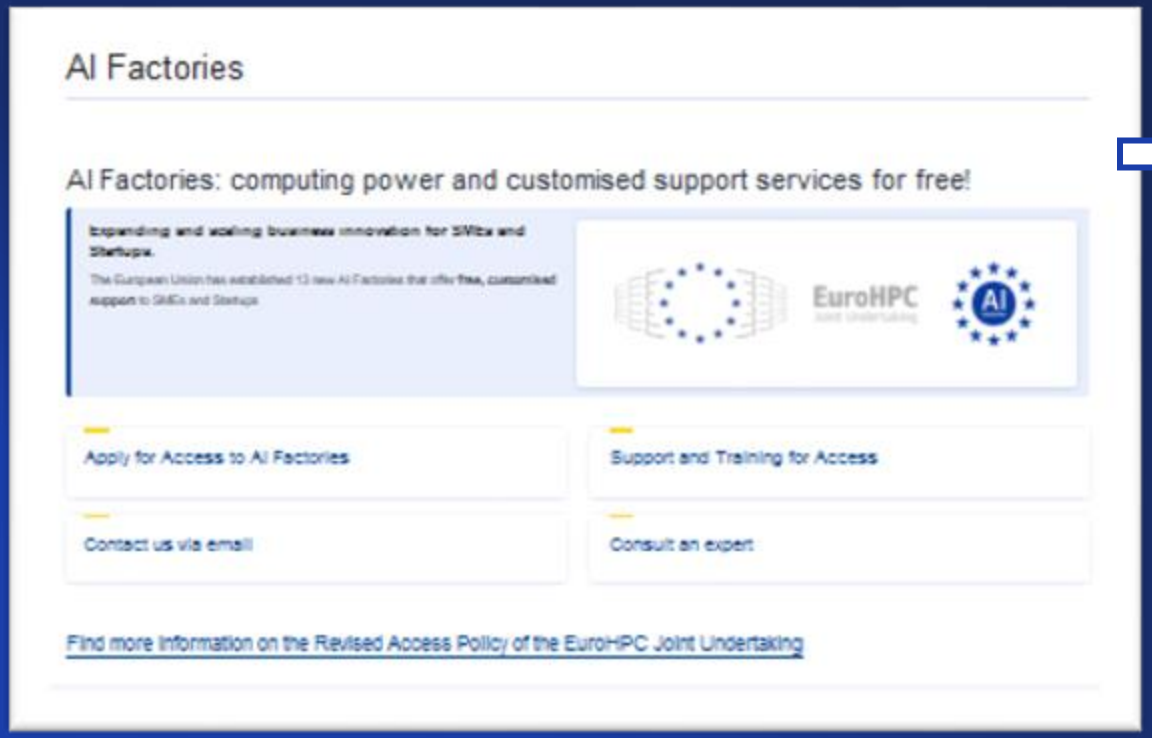
AI Factories

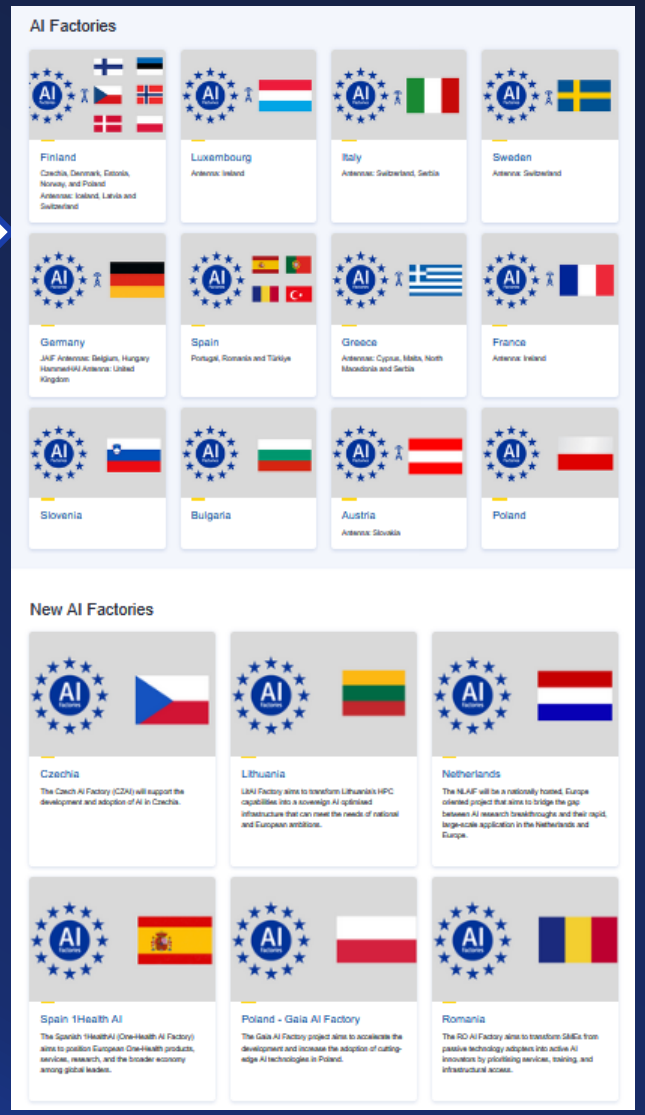
- **Dynamic ecosystems, including AI-optimised supercomputers, data capacities, programming and training facilities, and human capital** to support the EU AI industrial and research ecosystems in developing large AI models and applications.
- Novel approach to AI innovation based on a **network of public supercomputers providing an open environment to AI developers**.
- **AIFs & AIF Antennas gradually o**perational 2026.
- **Strategic sectors**: Health/Life Science; Manufacturing; Climate/Environment; Space; Finance; Cybersecurity; Agri-tech/Agrifood; Education/Arts/Culture; and more.
- Largest AIFs expected to have each around **25 000 advanced AI processors**.
- Overall investments in supercomputing infrastructures and AI Factories around **EUR 10 billion** (2021-2027).

AI Factories



Gateway to AI Factories





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

European Commission

Access for “classical" HPC

BENCHMARK

For scaling tests & benchmarks

Fixed amount of allocation for 2 or 3 months

Continuously open with monthly cut-offs

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

DEVELOPMENT

For code and algorithm development

Fixed amount of allocation for 6 or 12 months

Continuously open with monthly cut-offs

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

REGULAR

For projects that require large-scale HPC resources

Allocation duration: for 12 months

Continuously open with 2 cut-offs per year

Peer-review process duration: 4 months

EXTREME SCALE

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

Allocation duration: for 12 months

Continuously open with 2 cut-offs per year

Peer review process duration: 6 months

AI Access

AI AND DATA INTENSIVE for Collaborative Projects

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

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

Bimonthly cut-offs

Peer-review process duration: 1 month

INDUSTRIAL INNOVATION

- **PLAYGROUND**
- **FAST LANE**
- **LARGE SCALE**

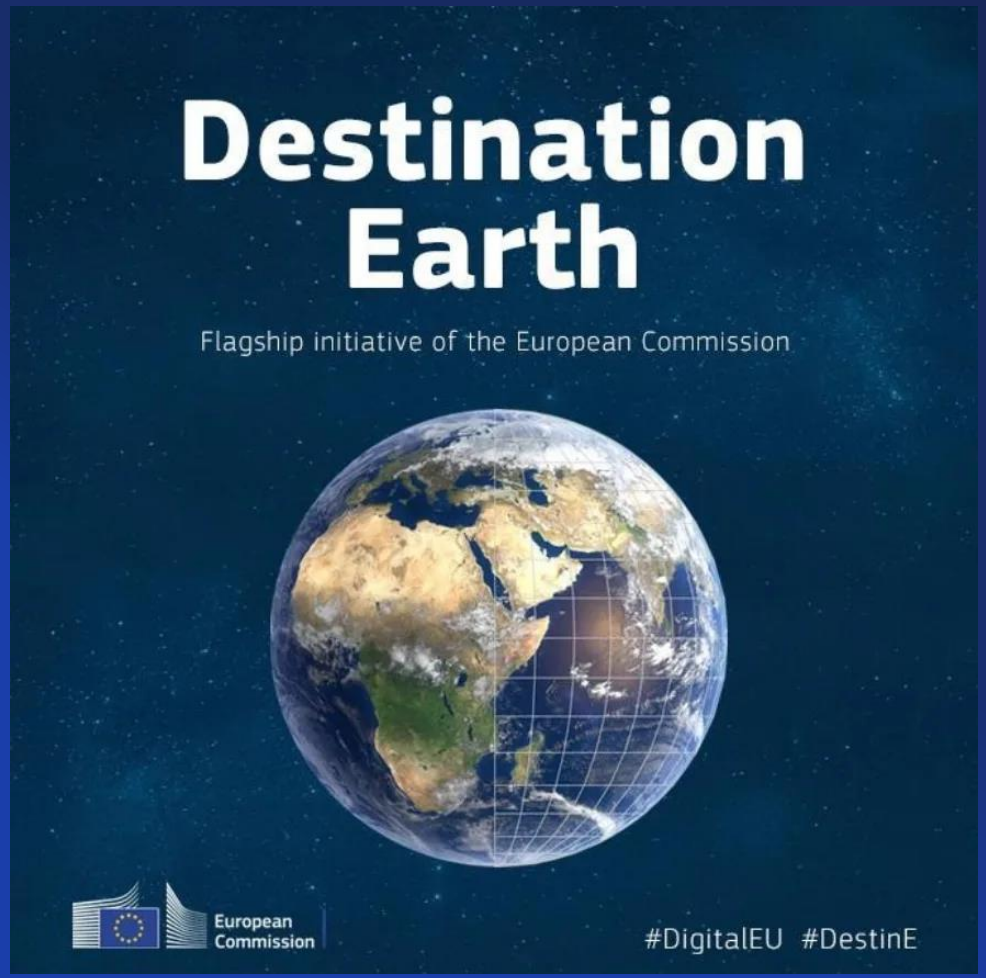
SELECTION: AIF Industrial Innovation Group

European Commission

AI Gigafactories

- Building on the concept of AI Factories, taking it to the next level by **integrating coherently** massive computing power, **beyond 100 000 advanced AI processors**.
- 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
  - Cost of 1 Gigafactory: **€4-5 bn**. Each being powered by around 100-250 MegaWatts
  - Total investment cost for infrastructure up to **€20 bn**
- 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.
- AIGFs will be selected through an **official Call planned for Spring 2026**
- AI Factories together with AI Gigafactories will pave the way for truly sovereign AI

Potential areas of collaboration



- AI Infrastructure Supporting the advancement of Earth-system modelling
- Shared Data Ecosystems and Sovereignty
- End-to-End AI Journey
- Capacity Building and Skills Development
- Accelerating Europe's Twin Transition

European Commission

THANK YOU