

IT4LIA AI Factory

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Direttrice HPC - CINECA

CONSORZIO NO PROFIT

Dal 1969, Cineca è accanto al sistema universitario e della ricerca in Italia

121 CONSORZIATI

2 ministeri, 70 università
49 enti di ricerca

6 UFFICI

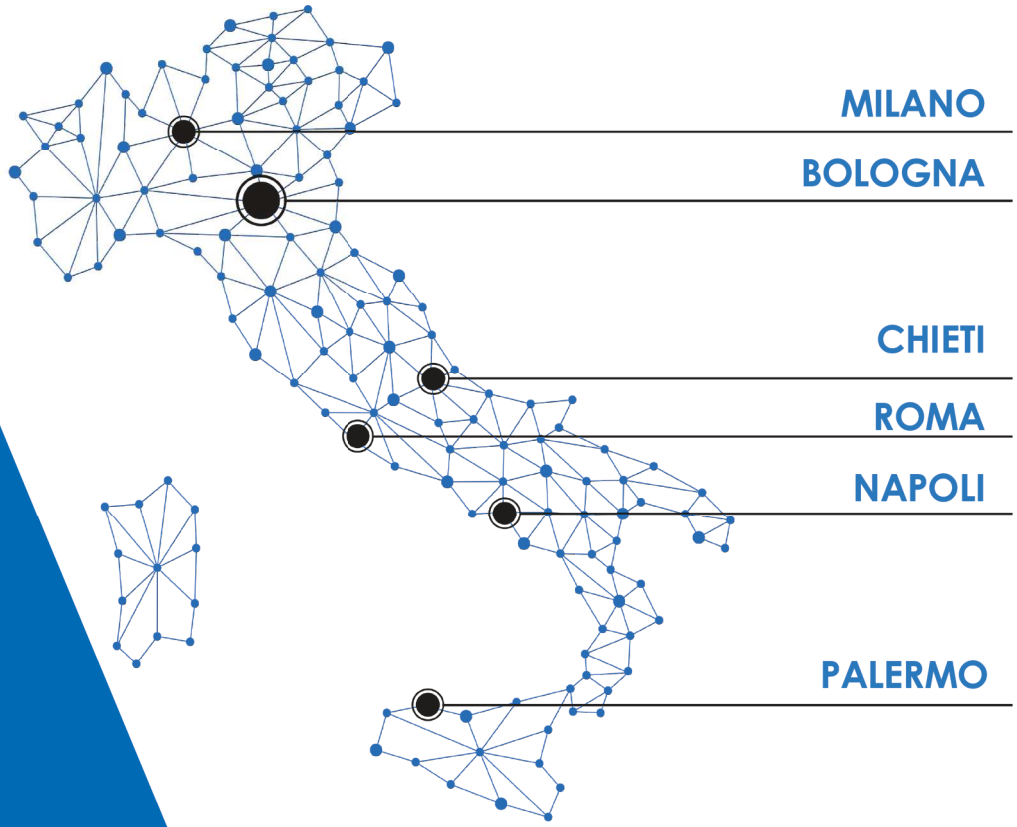
Bologna, Milano, Roma, Napoli, Chieti, Palermo

≃1000

Persone

≃ € 130M

Ricavi 2025



57 YEARS OF SUPERCOMPUTERS IN ITALY

TIMELINE OF CINECA'S SUPERCOMPUTERS

1969	1975	1985	1989	1993	1994	1995	1996	1998	1999
CDC 6600	CDC 7600	CRAY X-MP / 48	CRAY Y-MP / 48 IBM 3090-600 VF	CRAY C-90/2128	CRAY T30 64	CRAY T3D 128	CRAY T3D 128	CRAY T3E 256 SGI ORIGIN 16	CRAY T3E 256 SGI ORIGIN 64 IBM SP POWER 3
	1° SC IN ITALY	1° VECTOR SC			1° PARALLEL SYSTEM		1° MPP SYSTEM		
	1 TERAFLOP/S			10 TERAFLOP/S	100 TERAFLOP/S	2 PETAFLOP/S		PRE-EXASCALE	

2000	2002	2004	2005	2007	2009	2012	2016	2020	2022	2026
VIRTUAL THEATRE	IBM SP4 612	IBM SP5 512	IBM CLX XEON 1024	IBM BCX AMD 5120	IBM SP6	FERMI	MARCONI	MARCONI100	LEONARDO	IT4LIA AI Factory











EuroHPC
Joint Undertaking

EU COMPUTE POWER

19 + 13

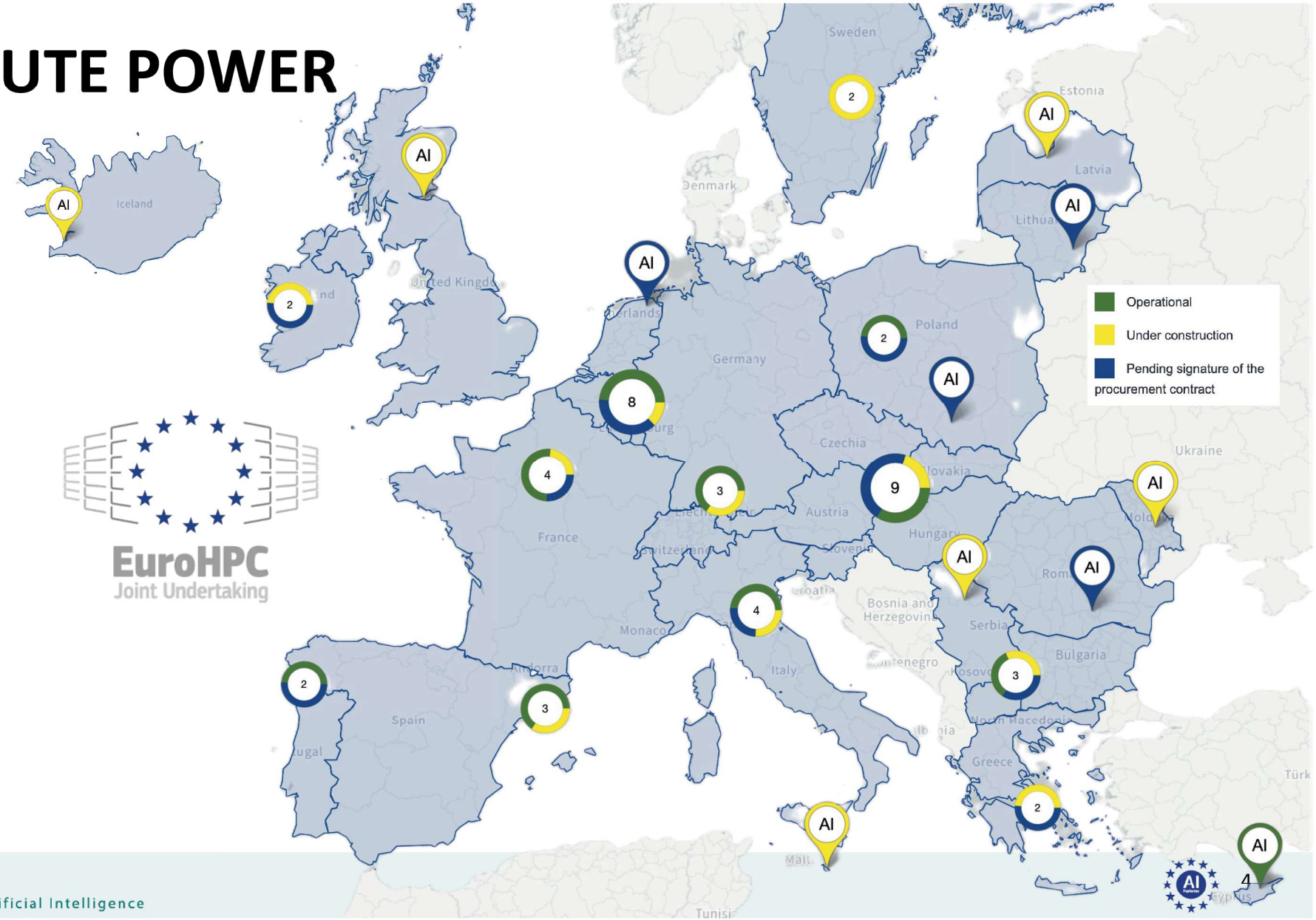
AI Factories + Antennas

14

Supercomputers

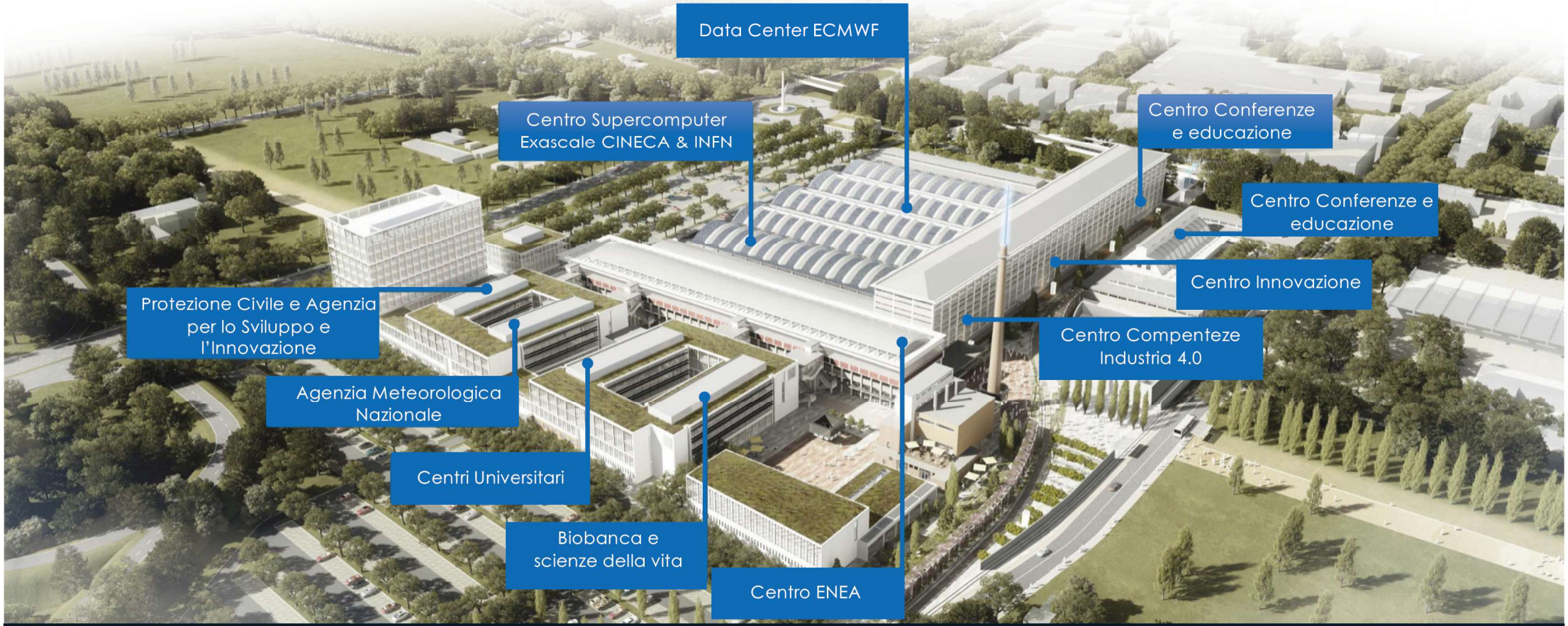
10

Quantum Computers

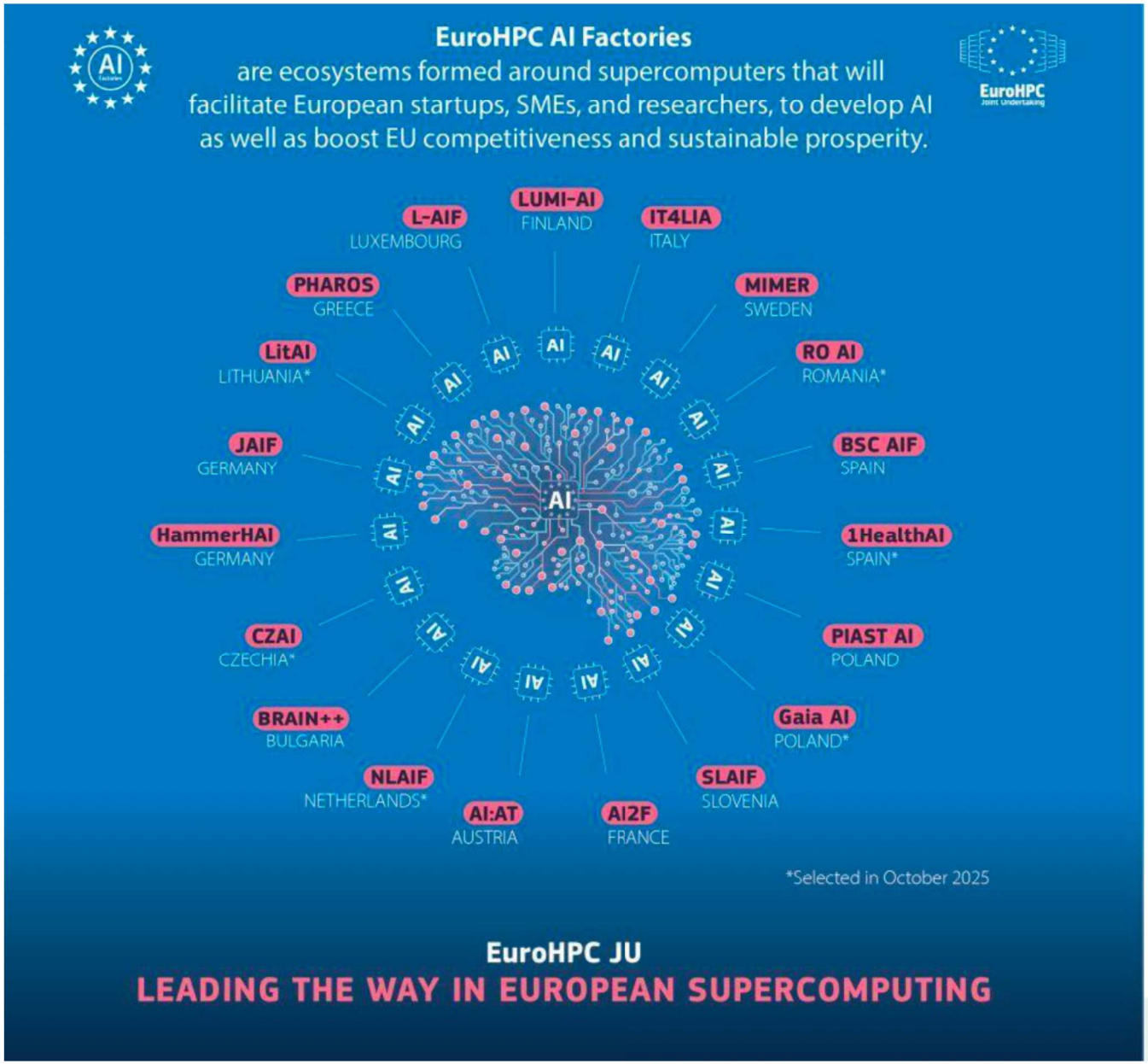



EuroHPC
Joint Undertaking
MUR
Ministero dell'Università e della Ricerca
Atos
LEONARDO
CINECA
240 PFLOPS
14.000 GPU – 2 PB RAM – 100PB storage

ITALIAN DATA VALLEY - DAMA



The Bologna Technopole, established through the collaboration between the Emilia-Romagna Region and the Ministry of University and Research (MUR), is a project of national and international significance. Thanks to the presence of the data centres of ECMWF, CINECA, and INFN, it stands as one of Europe's leading hubs for high-performance computing and data processing..



European network

IT4LIA is part of the “AI Factories” network co-funded by the European Commission

Supercomputer EuroHPC

The AI Factories leverage the power of **existing and future EuroHPC** supercomputers

Sectorial innovation

Supporting development in health, manufacturing, climate, cybersecurity and other domains

IT4LIA AI Factory

SUPERCOMPUTER EU per l'AI

PROMOTERS

HOSTING ENTITY

CINECA

Other Participating Member States

Partners



IT4LIA AI Factory: design principles of the IT4LIA AI optimised supercomputer



x10 AI performance of Leonardo

LEONARDO

- AI Training: 10 Exaflops
- AI Inference: 20 Exaflops

IT4LIA AI FACTORY

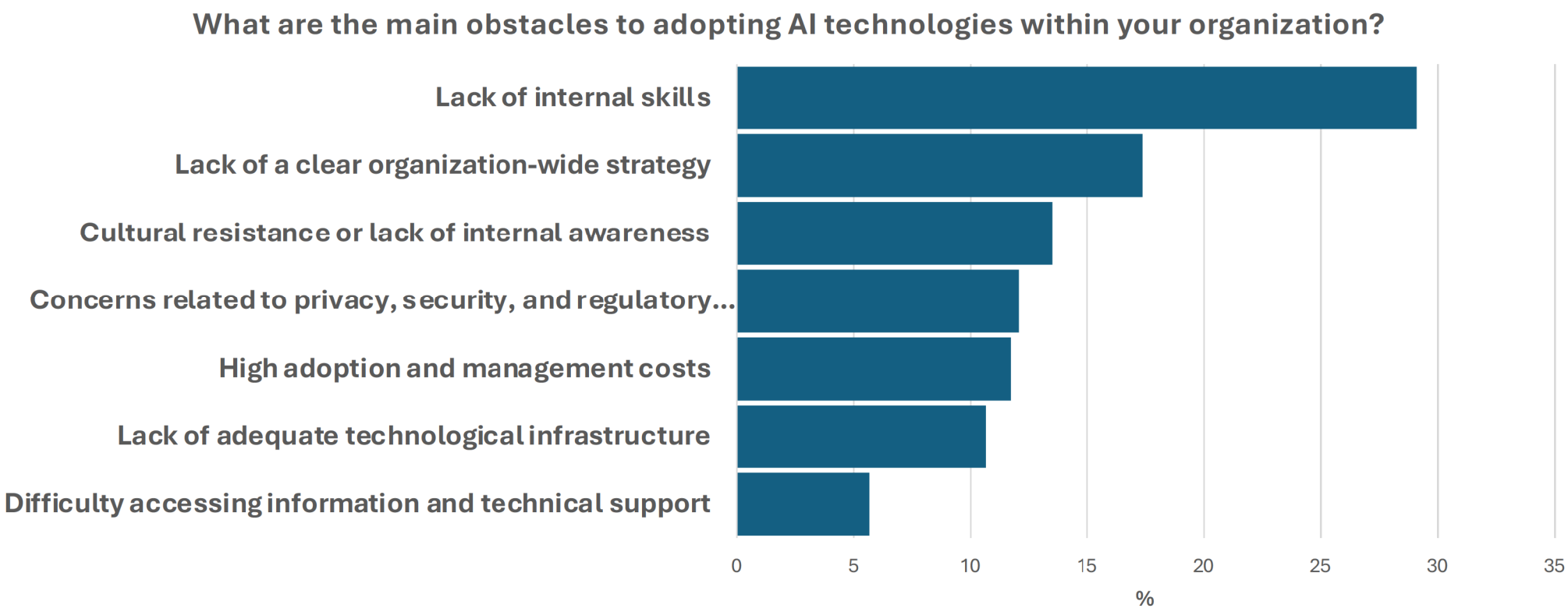
- AI Training: 100 Exaflops
- AI Inference: 200 Exaflops



A decisive step for the future of Artificial Intelligence in Italy and Europe.

IT4LIA AI Factory is moving into its next phase with the development of a new AI and HPC infrastructure. EuroHPC JU has signed a procurement contract with E4 Computer Engineering and Dell Technologies to deploy **a new AI-optimised supercomputer**, which will be installed at the **DAMA Tecnopolo Data Manifattura Emilia-Romagna** and operated by CINECA **as part of the IT4LIA AI Factory.**

From needs to opportunities



What IT4LIA AI Factory offers

Resources, expertise, and tools to accelerate the adoption of Artificial Intelligence.

HPC computing hours

Supercomputer EuroHPC LEONARDO, LISA, cloud GAIA, MEGARIDE, IT4LIA. Thousands of GPUs available

Expert Support

Technical and strategic consulting, end-to-end, provided by AI and HPC experts

Open-Access Solutions

Repositories of open services, datasets and AI models, developed within IT4LIA's vertical domains

Open Repository →

Training

A comprehensive program including: dedicated courses, hackathons, internships

Training calendar →

Internships →

Matchmaking

Connecting companies, researchers, startups, and PA to build AI partnerships

SUK →

Link UP→

Access through calls
Open access

How you can access the services

IT4LIA AI Factory services are flexible and designed to accommodate different levels of need, complexity, and resource requirements. They are grouped into two main categories:



HPC computing power

Access to major HPC systems (such as Leonardo, GAIA, LISA), with thousands of GPU hours available.



Expert support

Technical and strategic consulting, end-to-end, provided by AI and HPC experts

Every engagement starts with an **Assessment Meeting** to analyse use cases, challenges, and objectives. The outcome is a tailored guidance report.

Start your IT4LIA AI Factory journey →

Access path



STEP 01

User Request

Website, "**What we can do for you**" section.



STEP 02

Assessment Meeting

30-minute online meeting. Tailored guidance report. Needs assessment and definition of the most suitable path, with or without a defined project.



STEP 03

Access Call

Participation in the call for HPC resources and technical support.

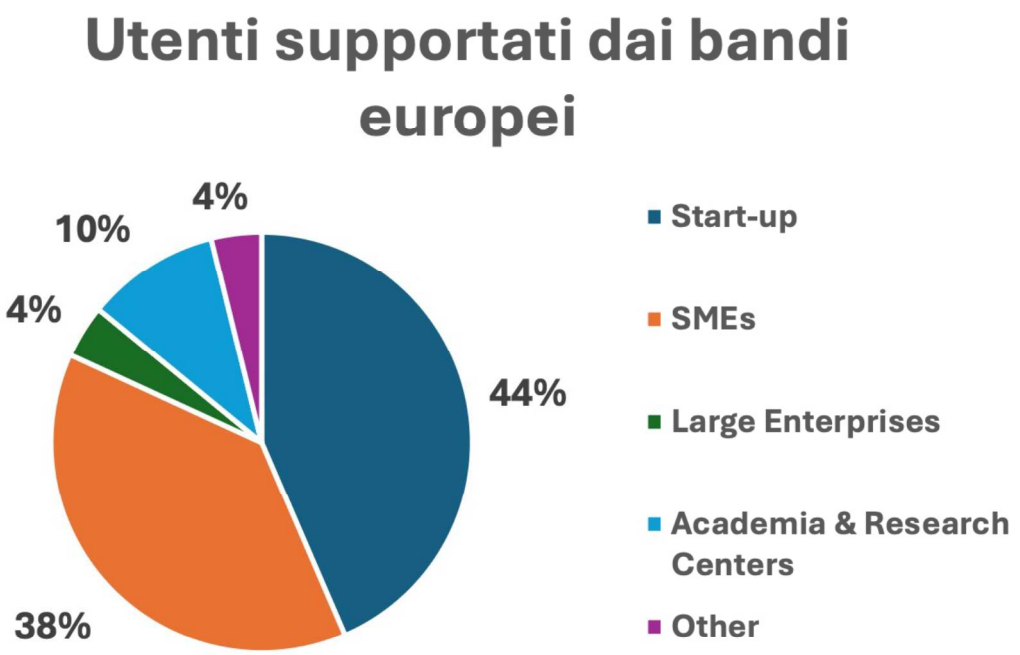


STEP 04

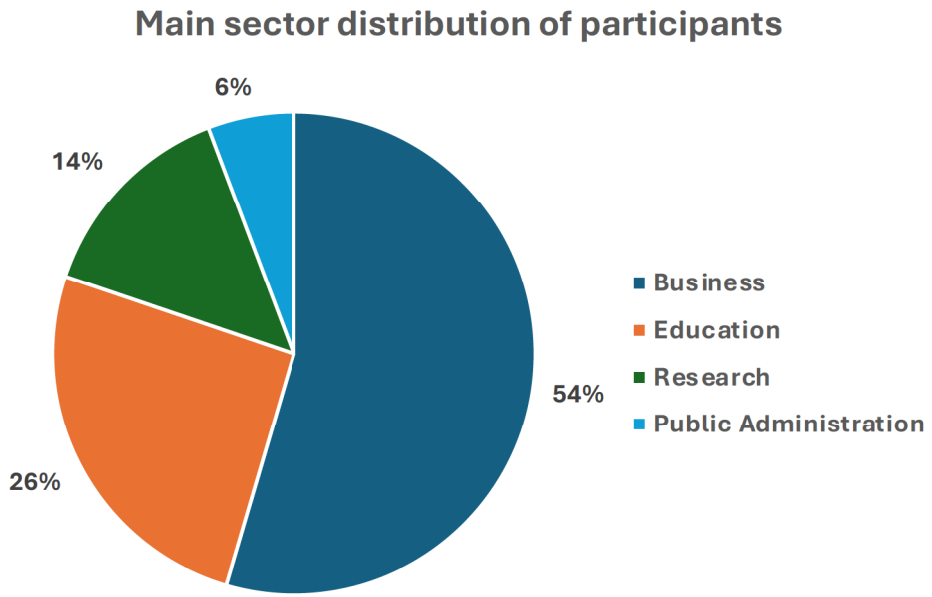
Service Activation

Access to Leonardo, GAIA, LISA, MEGARIDE, IT4LIA, and the expert support team.

Progetti erogati 516



Upskilling



GPUh allocate > 53M

18 corsi, 1000 partecipanti > 1000

Advanced Services and High-Performance Computing

27 Available Services

Data-Related Services

Data Discovery
Data Creation
Data Management
Data Preparation

Horizontal Services

AI Development
AI Setup
AI Test
AI Trust

Vertical Services

Domain AI Advisory Support
Domain Prototyping & Application Development Support

Skills Development

Quattro servizi Trust complementari

01

Compliance legale

Requisiti applicabili, gap e percorso di adeguamento.

02

Valutazione del rischio

Scenari di rischio, priorita e misure di mitigazione.

03

Affidabilita tecnica e Sandbox

Test controllati e raccolta di evidenze su sistemi AI.

04

AI in sistemi critici

Incertezza, stabilita, controllo e vincoli operativi.

Sandbox

Uno spazio di sperimentazione in cui sviluppare e testare sistemi AI,
con condizioni, obiettivi e limiti definiti, per individuare rischi e raccogliere evidenze.

SANDBOX REGOLATORIA

Accompagna la sperimentazione nel quadro normativo.

Opera sotto la supervisione delle autorita competenti, con orientamento sui requisiti applicabili.

Supporta apprendimento e preparazione alla conformita.

SANDBOX TECNICA

Valuta come si comporta il sistema.

Test tecnici delle proprietà elencate nell'AI act.

Produce metriche, risultati e indicazioni di miglioramento.

IT4LIA: infrastrutture e competenze per produrre evidenze tecniche.



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