



Una fabbrica di AI per l'innovazione aziendale

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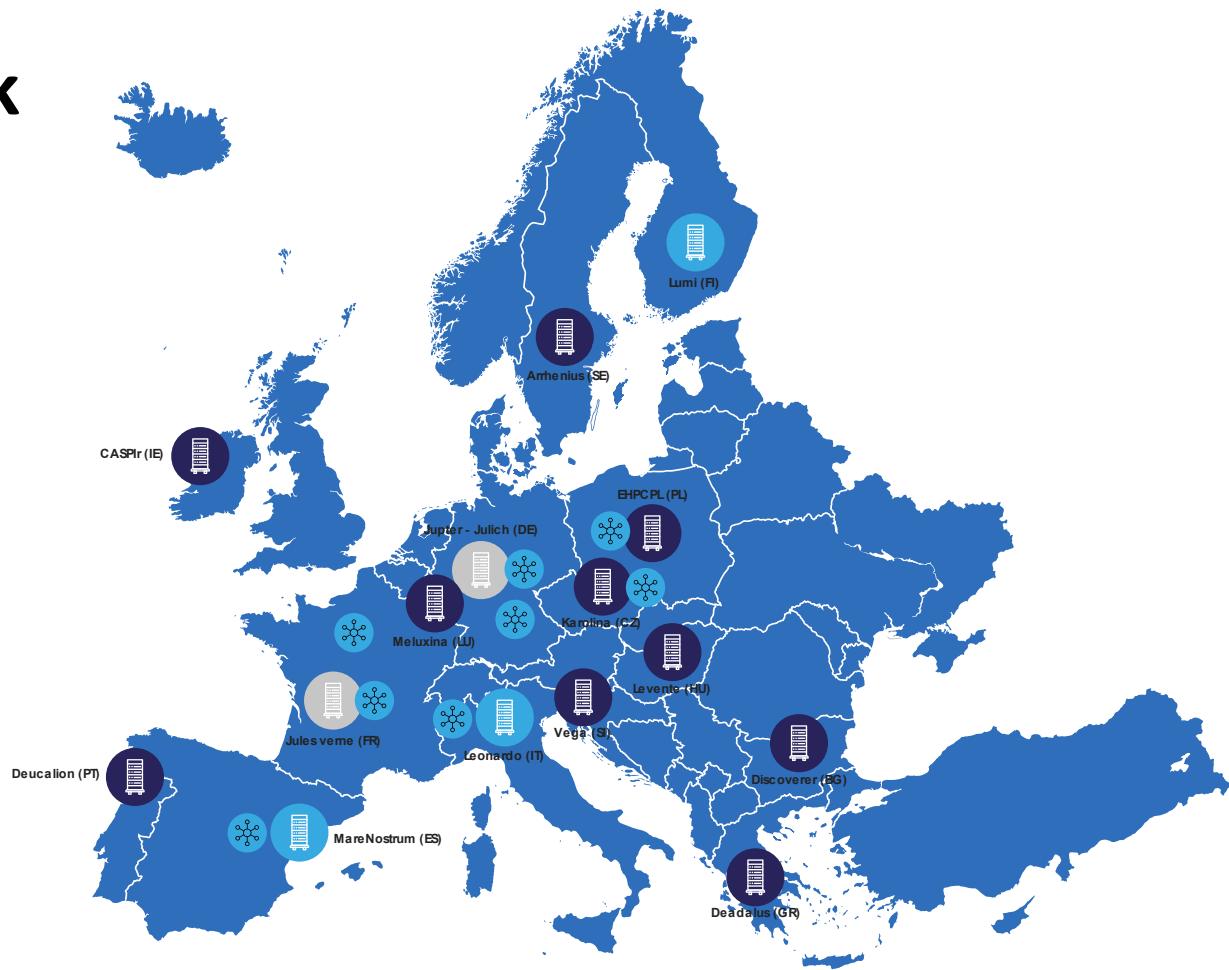
The background of the image shows a server rack in a data center, with a complex network overlay of blue and green lines and nodes. The text is centered over the image.

HPC

Plasma il mondo digitale: contrae il tempo, dilata lo spazio

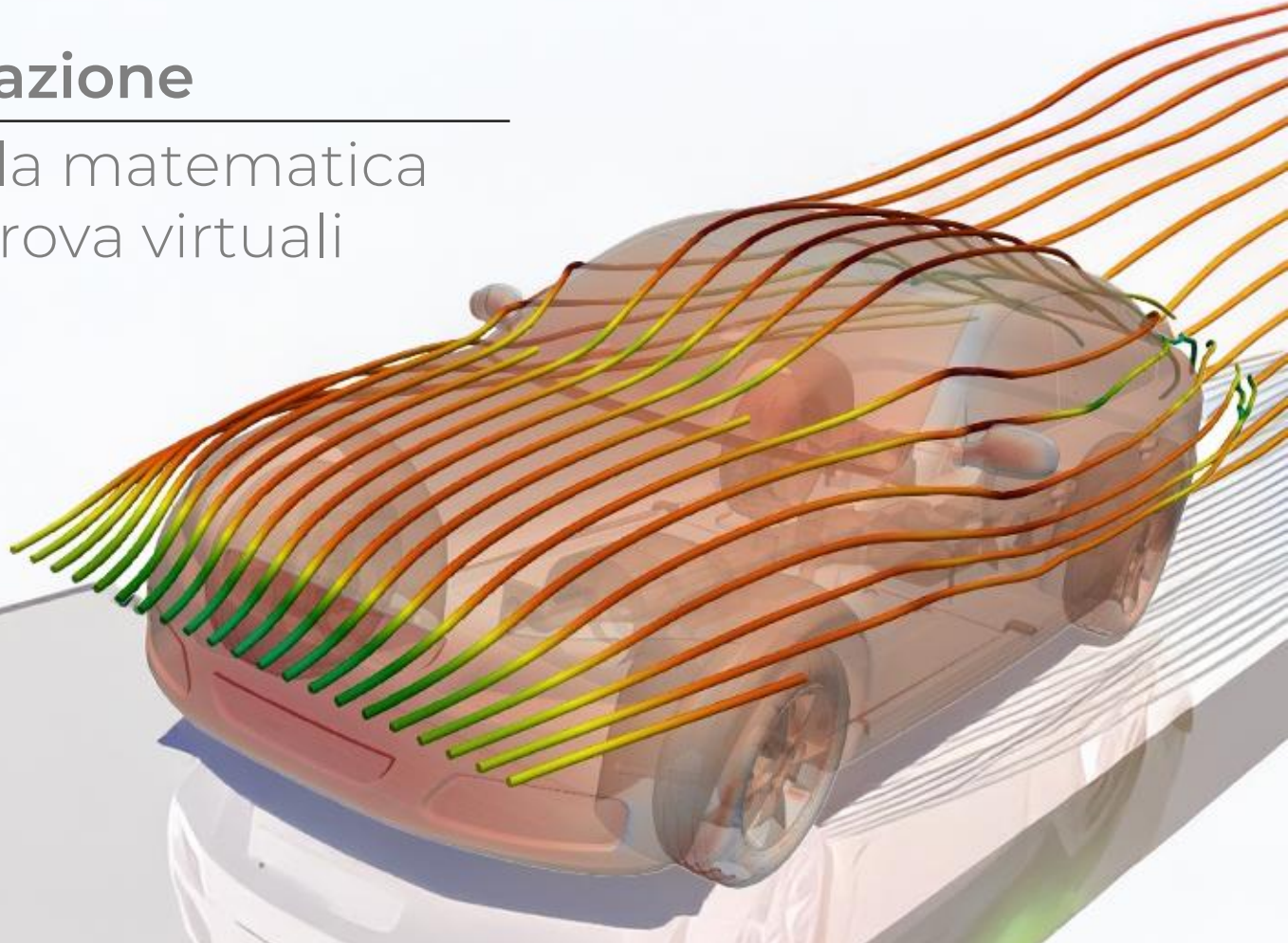
Euro HPC network

- Exascale
- Pre-exascale
- Petascale / mid-range
- Quantum system / simulator



Simulazione

Costruire con la matematica
banchi di prova virtuali





localhost:8501 115%

Deploy

Navigation

Create Index

Load ChatBot



Vectoria

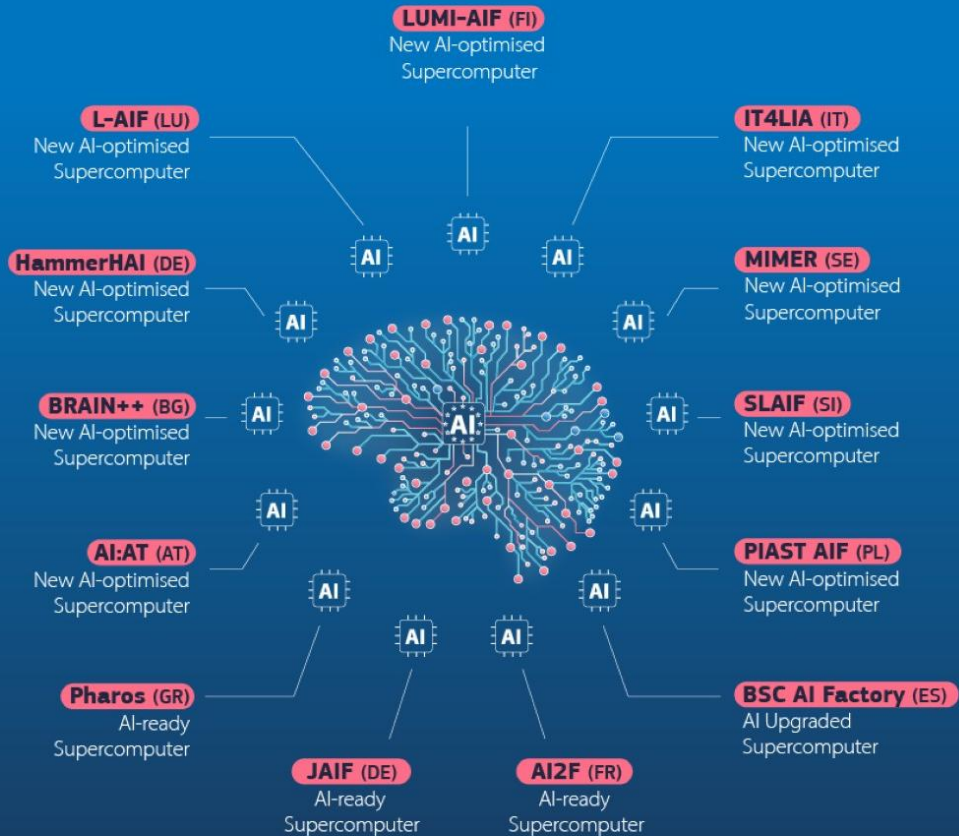
ChatBot is not loaded yet.



Intelligenza artificiale

Un/a collega junior, che grazie ai supercomputer, impara a velocità incredibile

EUROHPC AI FACTORIES ECOSYSTEM



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 EuroHPC supercomputers



EuroHPC
Joint Undertaking

March 2025



The Italian Data Valley

European reference point

Reference point for supercomputing, Big Data, and AI

Strategic investment

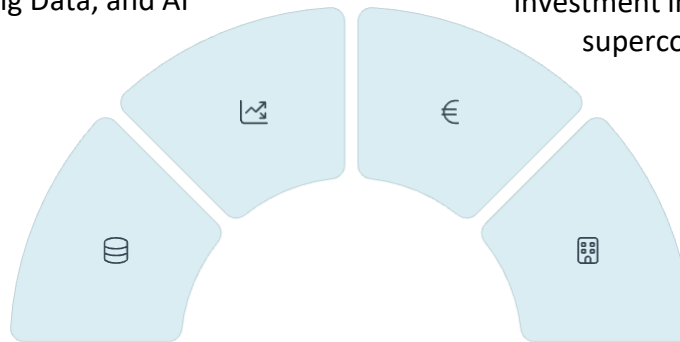
Largest Italian infrastructure investment in Big Data and supercomputing

Centre of excellence

DAMA-Tecnopolo Data Manifattura Emilia-Romagna is technological heart of IT4LIA AI Factory

Supercomputing

Hosting leading-edge supercomputers, with a quantum system coming soon



What is IT4LIA AI Factory

Computing resources and services for advanced AI



Strategic initiative national and european

Aimed at transforming the technological landscape by accelerating AI adoption and creating a competitive European ecosystem



Advanced infrastructure and computing resources

To meet all AI workload requirements



Integrated services and a comprehensive portfolio

Services for data preparation, processing, model training, and inference accessible to enterprises and startups

Promoters



EuroHPC
Joint Undertaking




Hosting Entity

CINECA

Other Participating Member States

 Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology

 REPUBLIC OF SLOVENIA
MINISTRY OF HIGHER EDUCATION,
SCIENCE AND INNOVATION

Partners

 Regione Emilia-Romagna

 INFN
Istituto Nazionale di Fisica Nucleare

 AI4I

 FBK
FONDAZIONE
BRUNO KESSLER

 ItaliaMeteo

 ICSC
International Centre for
Complex Systems

 iFAB
International Facility for
Advanced Beamline

 SAPIENZA
UNIVERSITÀ DI ROMA

 UNIVERSITÀ DI BOLOGNA

 UNIMORE
UNIVERSITÀ DI MODENA
E REGGIO EMILIA

 UNIVERSITÀ
DI TORINO

 ART-ER
Advanced Research
Technology European
Research

 CONFINDUSTRIA

One of the most powerful infrastructure in Europe



LEONARDO

Pre-exascale supercomputer EuroHPC



LISA

Optimized upgrade for AI applications



GAIA

Integrated cloud system



MEGARIDE

To cover the entire range of AI applications

Computing infrastructure built to merge HPC and cloud capabilities for AI ecosystem enhancement



Services

Solutions for Business, Research, and Society



IT4LIA targets **public and private entities** interested in developing innovative projects based on Artificial Intelligence



Comprehensive suite of services, including no-cost access for eligible startups, SMEs, public administrations, and academic institutions, as well as tailored offerings for other innovation actors

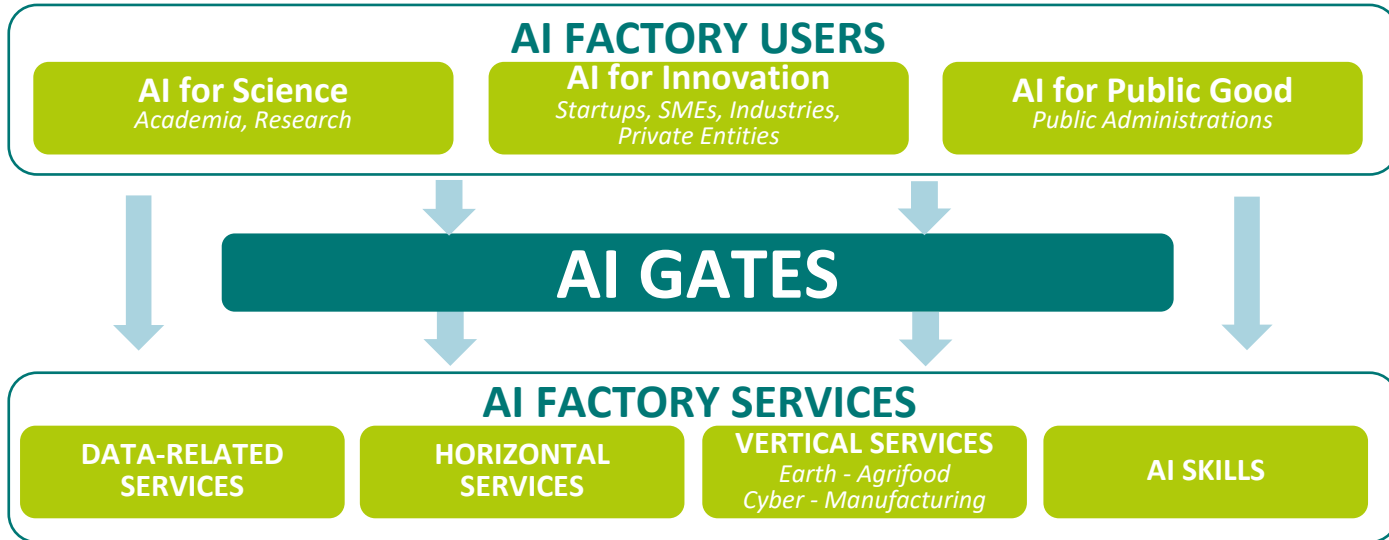


Additionally dedicated services in **earth, manufacturing, cybersecurity and agritech**



A **full training program** is provided, featuring structured courses, practical hackathons, and internship opportunities

Services



Data related services



Data discovery

Tools and support to identify and understand data relevant to a specific use case



Data preparation

Data preprocessing services including cleansing and anonymization



Data analytics

Automated processing of complex data for in-depth analytical insights



Data creation

Synthetic data generation for training or testing AI models

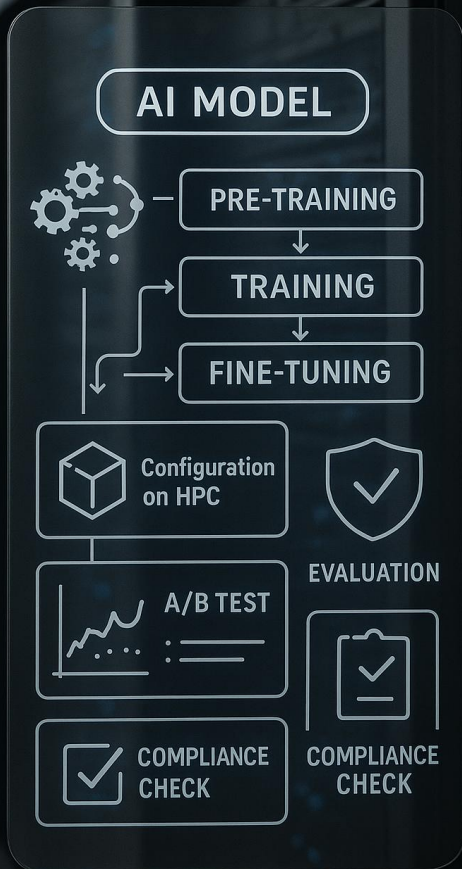


Data management

Secure and efficient data flow: from orchestration to access, powering your AI workflows

These services will cover a broad range of functionalities, enabling users to access, integrate, and reuse large volumes of heterogeneous data while effectively addressing challenges related to **interoperability, security, quality, and governance**

Cross-cutting services



AI set up

Initial support services for building AI workflows on HPC infrastructure



AI development

Support for building cutting-edge AI solutions leveraging HPC capabilities



AI test

Safely test AI models with controlled performance and scalability evaluation



AI trust

Support for developing reliable and regulation-compliant AI systems, ensuring security and transparency



AI network

Connect with strategic partners, unlock expertise, and grow new opportunities

Development and testing of AI models on HPC across the entire lifecycle, in a compliant and scalable way



Vertical sector-specific services

Integrated solutions combining data, large-scale AI models, and services to support cross-sector adoption, innovation, and stakeholder collaboration

Cybersecurity

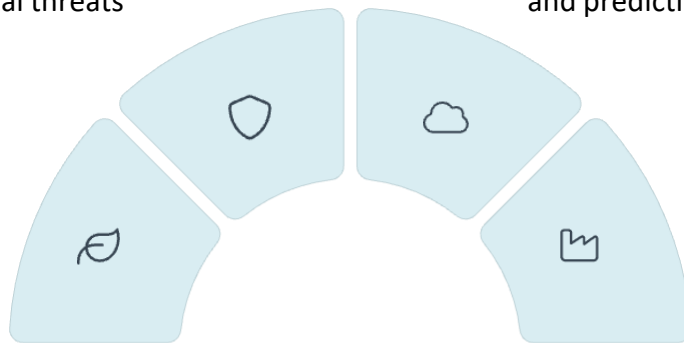
Enhanced cybersecurity for detecting and mitigating digital threats

Earth

Environmental data analysis and predictive modeling

Agritech e agrifood

Develop AI-driven solutions supporting sustainable farming and agri-food systems



Manufacturing

Process optimization in industrial settings

Examples of Vertical Services: Manufacturing

Process optimization

AI solutions for automation and real-time monitoring of production lines

Quality and sustainability

AI-enabled quality assurance and production waste minimization

Predictive maintenance

AI models designed to minimize operational downtime and maximize efficiency in resource use

AI to support sustainable production through energy efficiency and adaptive process management.

Training



Adaptable learning formats

Live remote sessions, self-paced courses, and real-time training.



Practical training sessions

Hackathons, advanced schools, and hands-on internships.



Professional growth

Certifications, expert-led sessions, and career development opportunities.

IT4LIA provides educational programs to build AI competencies for students, researchers, and professionals through an e-learning platform designed to meet diverse needs, promoting AI adoption and innovation across the ecosystem

Contact us

Join us and ride the wave of innovation!



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IT4LIA AI Factory

Qrcode



IT4LIA
AI FACTORY

THANKS!

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