

AI senza hype: dal dato all'impatto reale

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Ministero delle Imprese
e del Made in Italy



Ministero
dell'Economia
e delle Finanze



DIPARTIMENTO
PER LA TRASFORMAZIONE
DIGITALE

Advancing AI is crucial to Boost Industrial Productivity, Strengthen “Made in Italy” Differentiation, and Expand Global Competitiveness

①

Productivity

- Italy faces a **persistent productivity gap** compared to other advanced economies
- This **structural weakness threatens Italy’s long-term competitiveness**, especially given the **centrality of manufacturing and SMEs** in its economic fabric¹

②

Product and process differentiation

- Italy’s competitive advantage lies in **product excellence and sectoral specialization** (manufacturing, agri-food, fashion, furniture, tourism).
- However, **this advantage risks being eroded by global competition** and the widespread availability of standardized digital solutions¹

③

AI as a “standalone” industry

- **Italy lags significantly in the development of AI as a standalone industry.**
- Since 2017, the country has **produced just 350+ AI startups and around 600 patents**, placing it at the tail end in Europe²

Artificial Intelligence can significantly improve productivity by optimizing processes, reducing errors, cutting costs, and enhancing product and service quality

AI is a key enabler of differentiation, allowing Italian firms to create smarter products and **reinforce the ‘Made in Italy’ identity**, protecting it from the homogenization driven by foreign AI models

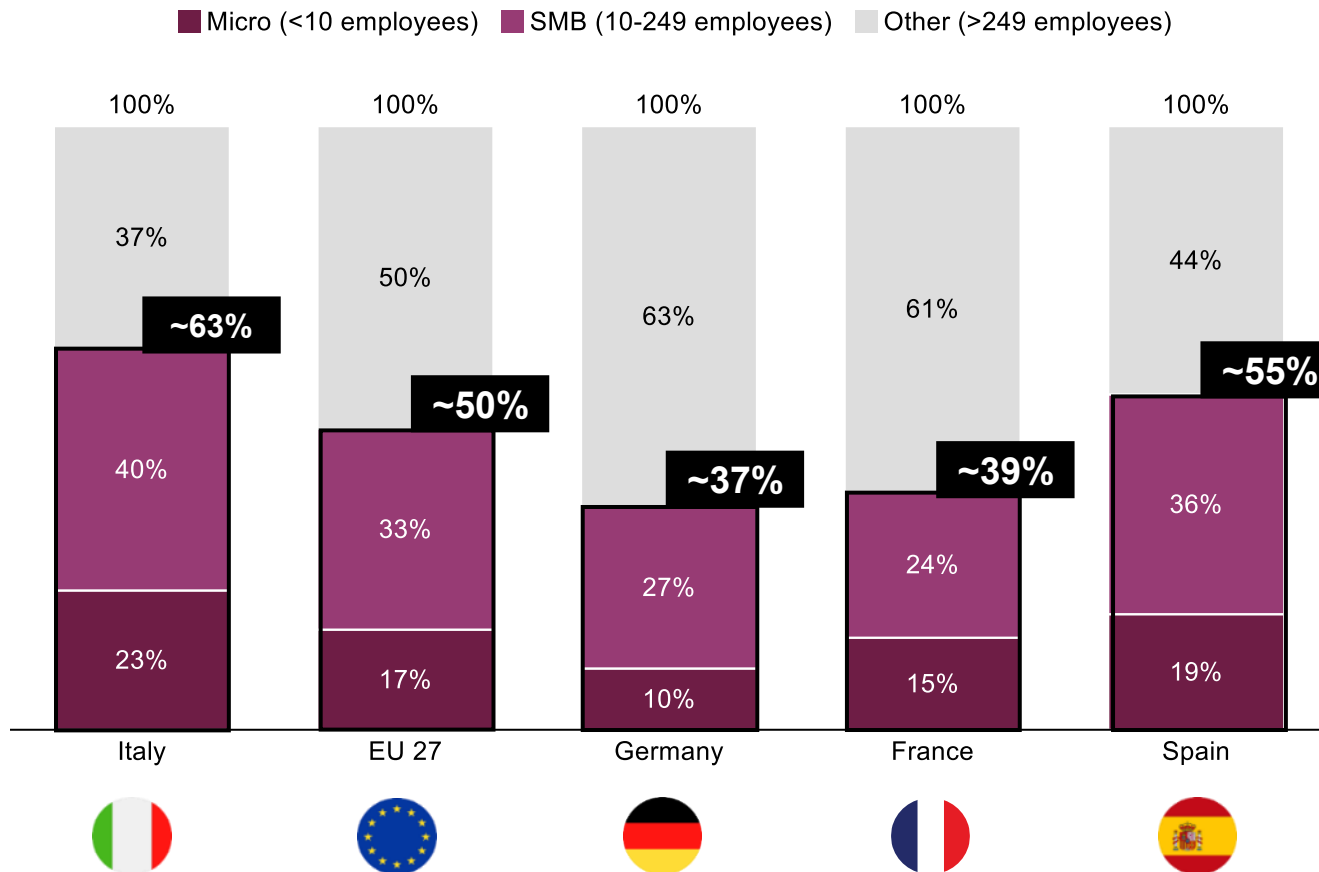
A strong domestic AI industry is vital to capture value, reduce dependence on foreign providers, and build innovation ecosystems; **driving competitiveness, high-skilled jobs, IP, and scalable solutions for export**

Italy's economy is more reliant on SMEs and Micro (~63% turnover vs. ~50% EU), exposing a structural gap in AI adoption / investment vs. EU peers



CONTEXT

Italy shows the highest SMB contribution to turnover in EU...



Source: Eurostat

...with AI being increasingly critical for innovation

Limited Industrial Adoption

- Despite a **strong research ecosystem**, AI industrial adoption remains limited. Only **15% of Italian SMBs** launched an AI pilot in 2022, though this was a **9% increase** from the previous year

Dependence on Imported Solutions

- Many firms still **rely on importing solutions** rather than **developing tailored AI technologies domestically**

Rising Enterprise Interest

- Yet interest is growing, with **78.2% of companies** planning to **adopt generative AI** in the short-to-medium term, mainly for process optimization, creative support, and customer interaction

Uneven Diffusion Across SMEs

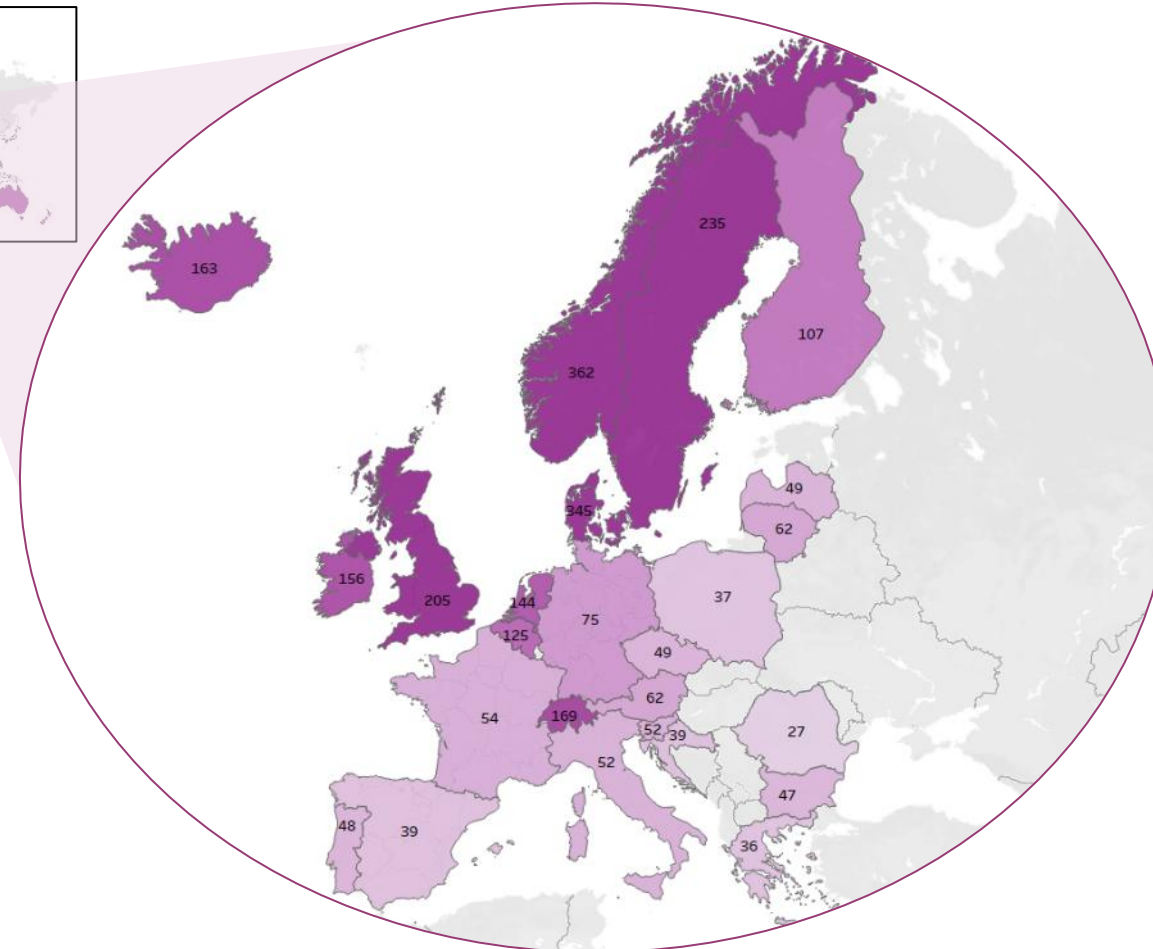
- However, **SMBs barriers** in skills, infrastructure, and financing **constrain a broader diffusion** and **slow down the integration** of AI for differentiation purposes

Challenges in AI Adoption – Focus Next

In EU, the highest concentration of small / medium-sized companies (≤ 100 FTE) specialized in ML and Agentic AI dev is in Norway, Denmark, Sweden, and the UK

CONTEXT

Concentration¹ of EU companies specialized in AI² per country per M inhabitants (#, 2025)



No. of companies in scope
per million inhabitants



Top 10 EU Countries

Country	Concentration Index
Norway	362
Denmark	345
Sweden	235
UK	205
Switzerland	169
Iceland	163
Ireland	156
Netherlands	144
Belgium	125
Finland	107

Italy
#15 – index 52
on 25 countries

Note: 1) Calculated as the incidence of the number of companies per million inhabitants; 2) Companies with 0–100 FTE specialized in AI, ML, or Agentic; Sources: Bain PI; World Bank

With Italy still lagging in AI adoption, AI4I aims to bridge structural gaps and position the country for competitiveness

CONTEXT

Current Gaps in AI Adoption



Industrial structure dominated by **SMEs with limited scale / resources**



Concentration in sectors exposed to tech innovation but **slow in adoption**



Overall lag in AI maturity compared to other advanced economies

Strategic Priorities for Italy's AI Future

01

Accelerate AI adoption within the **Italian industrial fabric** to sustain competitiveness

02

Strengthen the AI ecosystem across academia, startups, and enterprises and **attract investments**

03

Position Italy as a **key player in AI technologies** and solutions **development**

AI4I overview



The Italian Institute of Artificial Intelligence for Industry (AI4I) - established by the **Italian Government** - is the **Italy response to the need to enhance growth** of productivity and innovation in industrial sector

AI4I aspires to be both a **leading research hub** and a **catalyst for AI industrial adoption**, enabling companies to leverage AI to drive productivity and innovation



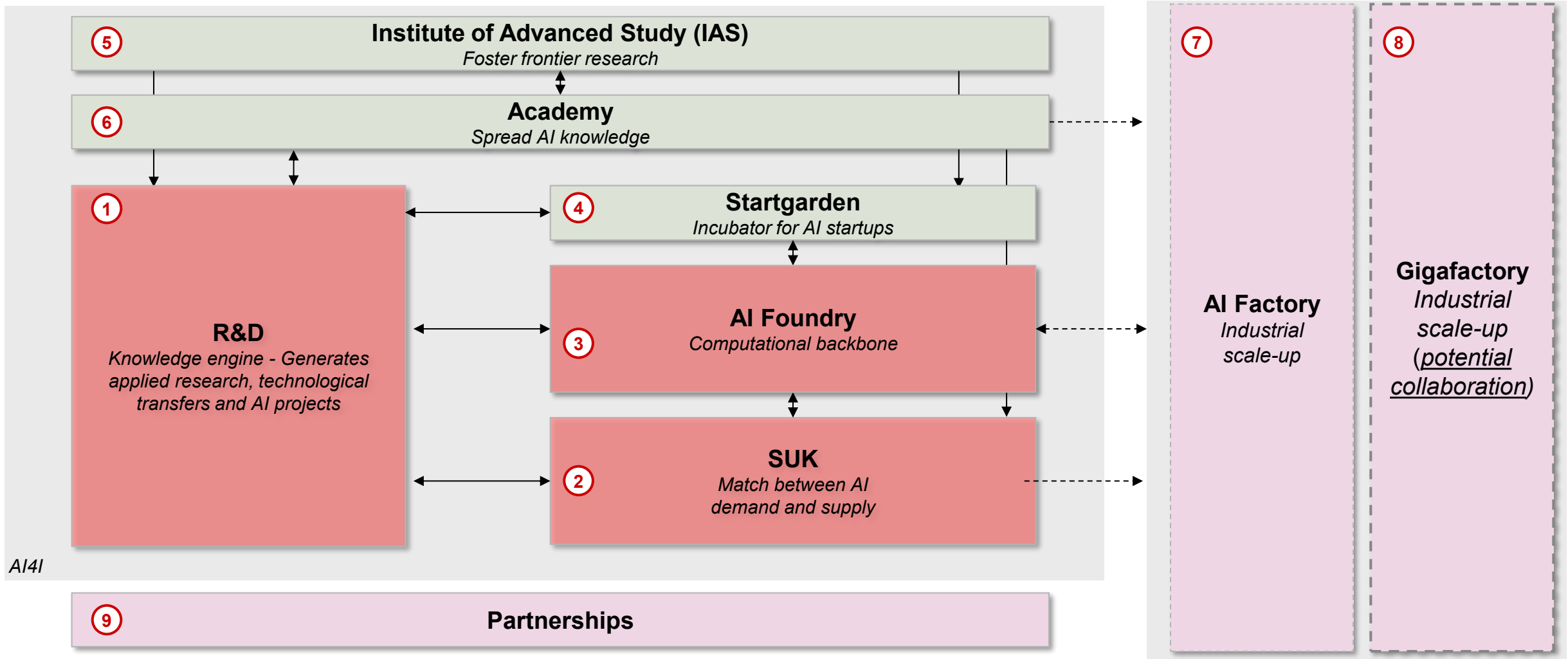
The Italian Institute
of Artificial Intelligence
for Industry

AI4I ecosystem connects market needs and knowledge with R&D, computational power, enabling industrial scale-up

P I L L A R S

Legend → Info flow/collaboration ■ Core offerings ■ Ancillary offerings ■ External pillar

AI4I ecosystem



Core offering related to AI Marketplace, R&D development & access to computational power

OFFERING

SUK: Demand-Supply Matching



- SUK attracts high-quality AI solution **Connects** AI solution providers with companies seeking innovation
- **Encourages collaboration** on innovation and problem-solving
- **Acts as the first contact point** for SMEs exploring AI opportunities
- **Supports the evaluation of use cases** and feasibility assessment

R&D: ad-hoc solutions



- R&D center focused on **6 application domains** that are critical for industry competitiveness
- Delivers tailored solutions **when existing offerings do not meet demand**
- **Leverages R&D capabilities** to design and develop ad-hoc solutions
- **Bridges potential matching gaps**, ensuring concrete alternatives for end users

AI Foundry: Computation backbone



- Provides **access to AI Foundry High Performance Computing (HPC)**
 - AI Partition (Nvidia B200 GPUs): dedicated power for training and running advanced AI models (e.g., LLMs)
 - General Purpose (Nvidia H200 GPUs): flexible computing for AI and general HPC workloads e.g., simulations, scientific analytics, large-scale data processing
- Offers **pre-trained models**, datasets, other digital assets under license and storage
- **Lowers technical and financial barriers** for experimentation and scaling

SUK attracts high-quality AI solution providers and facilitates the matching of industrial challenges with those best equipped to address them

S U K

Demand

Corporates/ SMEs

Industrial needs and testing ground

- Bring in AI needs, pain points and market challenges
- Articulate demand for AI solutions and validate their usefulness in real-world contexts

- Have access to **ad-hoc AI solutions** to be deployed, that are **AI4I certified**
- Benefit from **consultancy and ancillary services** (e.g., HPC)

What they do

Value Proposition



Offer

AI Supplier SMEs/ R&D Center

Provide AI solutions

- AI suppliers SMEs offer their off-the-shelf AI solutions
- Work alongside AI4I to design, test and refine tailored AI solutions
- Where no ready match exists, AI4I R&D develops ad hoc solutions

- **SUK as lead generator**
- Obtain **real-time feedback** on **solutions provided** and **market needs**

What they do

Value Proposition

SUK – the AI4I Marketplace

Platform that matches demand for AI solutions with supply of solutions, expertise and technologies

Comprehensive R&D Offering

R & D

OFFERING

Legend



R&D Labs



Deployment Unit

Internal R&D

1



Grant funded R&D

2



Joint Labs

3



Commissioned R&D

4



Consulting

5



R&D Unit



Depending on solution tech maturity

DESCRIPTION

- **Conducted internally** with no immediate commercial partner, focusing on **exploratory and frontier research**
- Aims to build **long-term scientific excellence** and new technological capabilities
- Typically supported by **public institutions or internal resources**, with high uncertainty but potential breakthrough impact
- Funded mainly through European or national calls, where research institutes and **companies collaborate**
- **Intellectual property is often shared** or remains precompetitive, enabling each participant to develop differentiated downstream products
- **Long-term collaborations** where both the institute and a company contribute resources
- Research focuses on **common areas of interest**, co-developing solutions aligned with industrial needs and **producing technologies** directly applicable to partner markets
- **Intellectual property is typically co-owned**, fostering joint innovation and technology transfer
- **Commissioned directly by a corporate client** to solve specific challenges or develop tailored solutions
- **Intellectual property** is normally **transferred to the client**, unless otherwise negotiated
- Allows clients to **leverage advanced methodologies** and infrastructure without building them internally
- Focused on **applied, near-to-market activities** such as feasibility studies, due diligence, and roadmap design
- Delivers **practical and actionable recommendations**, balancing technical feasibility with business goals
- Acts as a **bridge between research outcomes and industrial deployment**, supporting adoption and scaling

FOUNDING

Public

Private

AI Foundry value proposition based on offering of both HPC computational power and Engineering unit services

FOUNDRY

Hardware

Proprietary advanced computational platform infrastructure (80 GPU B200, 68 GPU H200, 5 PB high performance storage)

- **On-premise High-Performance Computing (HPC)** optimized for high Artificial Intelligence and Machine Learning workloads, equipped **with GPUs** and last generations AI accelerators
- **Supports** deep learning model training, simulations, optimization, and other **AI applications that require intensive computing**
- Offers high scalability and performance suitable **for training complex models** such as large language models (LLMs) and other foundation models



Services

Dedicated Engineering unit team to facilitate usage and access to infrastructure, and provide services

- **Act as a laboratory** where the R&D Institute can **work on the production and validation of PoCs**, with the support of Engineering unit
- Suite of **software services to manage the entire AI model lifecycle**: from training and cloud-based tuning to production deployment with continuous integration

Value proposition for key stakeholders

R&D center



Leverage computational power for research activities, including commissioned research

SUK – AI providers



Access HPC at favorable terms to enhance solution supply

Startups (Startgarten)



Access computational power and services to support scale-up

Academia



Access to HPC for research purposes

IT4LIA AI Factory is a strategic initiative designed to transform the AI landscape through cutting-edge HPC infrastructure and a comprehensive suite of services

- The Italian AI Factory (IT4LIA) is **co-funded by the EU and the Italian government**.

~300M€
CAPEX HPC

~100M€
OPEX HPC

~30M€
SERVIZI

Promotori



Ente ospitante

CINECA

altri Stati membri partecipanti



Partner



Scope

- IT4LIA AI Factory will act as a catalyst for the **creation and growth of a more competitive AI ecosystem both in Italy and the EU**, by leveraging on **EUROHPC LEONARDO** and **TECNOPOLO BOLOGNA infrastructural assets** and the rapidly growing AI national ecosystem.

Context

- The IT4LIA AI Factory aims to **catalyse a transformative shift in Europe's AI landscape by addressing Italy's critical challenges in AI adoption and industrial integration**. Despite Italy's robust academic and research ecosystem, the impact of AI on the industrial and entrepreneurial fabric remains limited, with only 15% of Italian SMEs initiating an AI pilot project in 2022, thus **placing Italy behind other European nations in AI adoption and innovation**.

IT4LIA AI Factory provides a variety of AI-related services to start-ups, SMEs and Large Enterprises

IT4LIA AI Factory target and services

Target / beneficiarie	Start-up & SMEs interested in developing artificial intelligence technologies		Free
	SMEs demanding AI solutions for industry		Free
	Large Enterprises (TBD)		TBD

Services provided by IT4LIA to industry	Orientation	Orientation Events		Webinars	
	AI Consulting and Assessment Services	Business needs analysis	Assessment of technological maturity	Estimation of potential AI impact	
	R&D Services	Research	PoC	Prototyping	Technology transfer
	Access to supercomputer	Use of computational power (@Cineca)		Support for access and configuration	
	Training	Comprehensive resources training			

AI Factory contacts

Sito web

www.it4lia-aifactory.eu

Mail

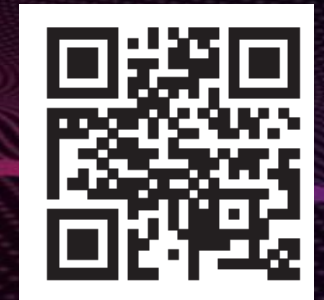
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Social

QR Code





The Italian Institute of
Artificial Intelligence

THANKS FOR THE ATTENTION!

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