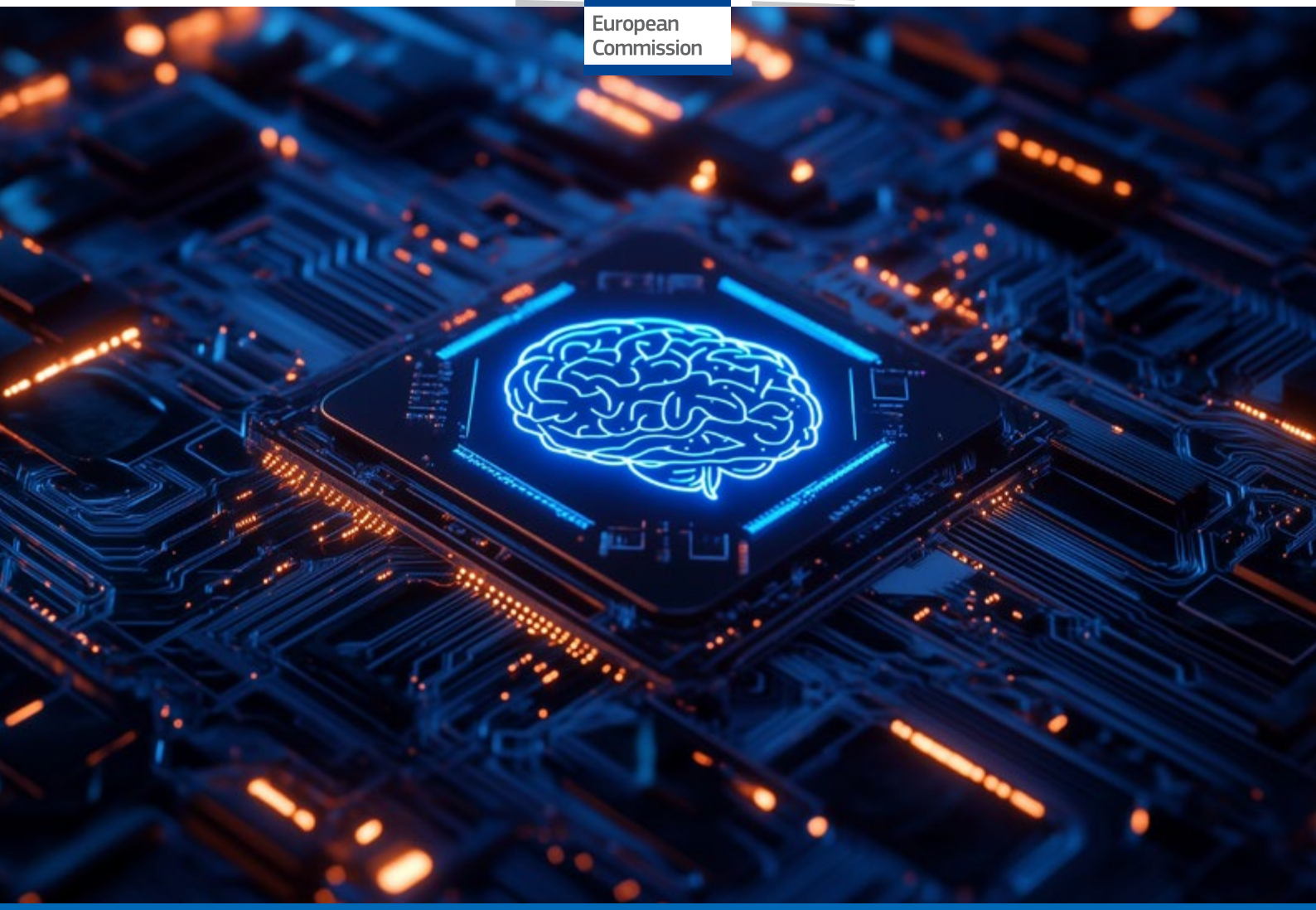
European Commission



A brief guide about the **European AI innovation ecosystem**

From the perspective of European Digital Innovation Hubs

EUROPEAN **ARTIFICIAL INTELLIGENCE** OFFICE

EDIH European Digital Innovation Hubs Network

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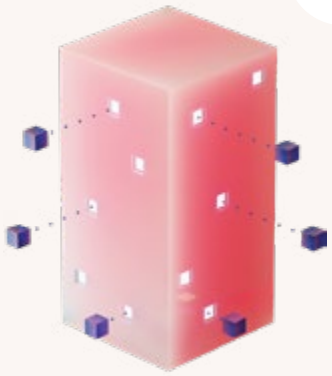
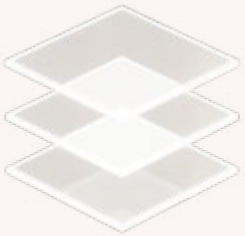


The objective of this document is to provide the European Digital Innovation Hubs (EDIHs) with an **overview** of the different infrastructures that **support the development and deployment of the AI innovation ecosystem** in the EU.

It includes examples of how **EDIHs** could collaborate with these infrastructures to offer businesses a flexible and relevant journey in their digital and AI transformation. It highlights the roles of each infrastructure, the relationships between them, as well as their key distinctive features.

These complementary infrastructures have been launched to make the EU the ideal place for innovations to progress from lab to market.

EDIHs will be crucial in achieving the goals of the AI Continent Action Plan and they will contribute to the increase of AI uptake across sectors, as outlined in the upcoming Apply AI Strategy.



Overview of existing AI infrastructure

AI-on-Demand Platform
is a central (online) marketplace for AI resources.

AI Skills Academy
attracts talent, upskills and reskills students and professionals in the EU.

Provide tools and AI resources to

EDIHs
are one major point of entry and information for users and providers of AI systems.
The AI Service Desk, collaborating with the network of EDIHs, will answer AI Act related questions.

Redirect stakeholders to support infrastructure

AI Factories
provide necessary resources (computing, skills and services) to develop advanced AI models.

TEFs
help innovative tech providers bring products from lab to market.

may use technical support and infrastructure of

AI regulatory sandboxes
provide a special regime and legal guidance for testing in real-world conditions.

European Digital Innovation Hubs (EDIHs)

What are EDIHs and what do they do?

EDIHs function as **one-stop shops** that help companies become more competitive in their business/production processes, products or services, through digital technologies (in particular AI). They deliver their support through four key services, namely:

- Providing access to technical expertise and experimentation facilities, particularly for AI-related services **(test before invest)**
- Offering training sessions to SMEs and public services for the upskilling and reskilling of the workforce, covering the adoption and use of AI technologies **(training and skill development)**
- Supporting the identification and facilitation of **access to potential financing sources** to aid digital transformation
- Fostering an **innovation ecosystem and networking opportunities**

Why were EDIHs created?

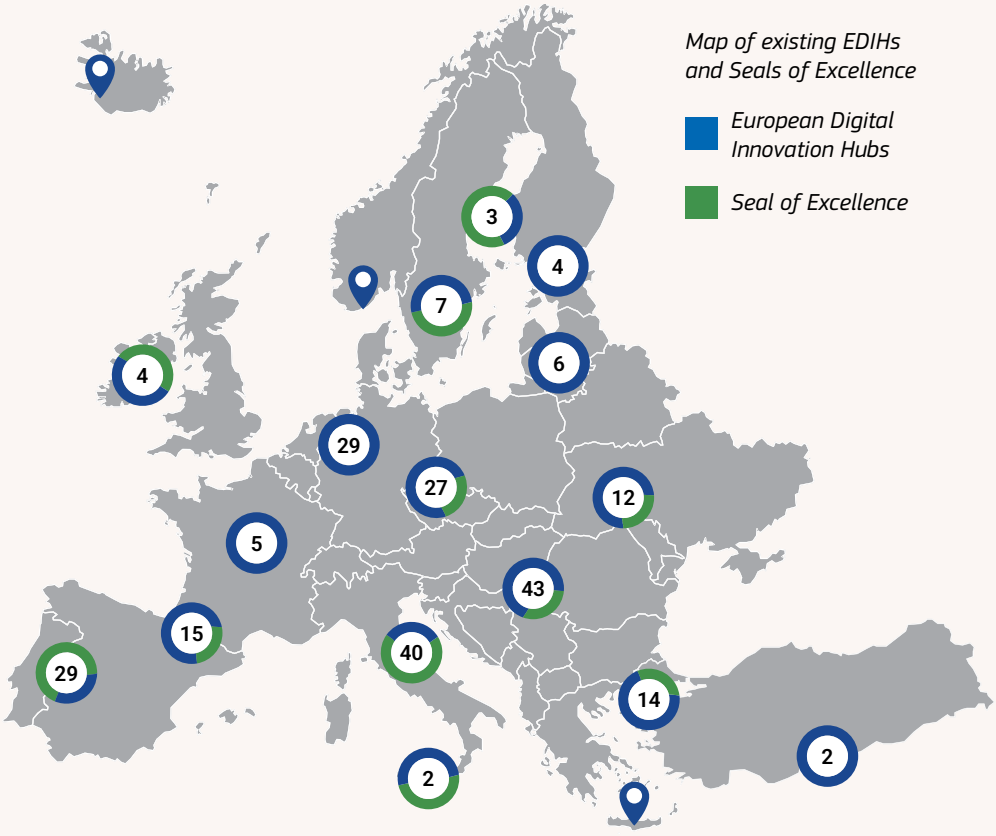
EDIHs were created to **accelerate the digital transformation** across Europe. In particular, the service category **test before invest** allows companies to understand how technology can help them make better products, services, processes or business models, before deciding to invest.

Who can benefit from EDIHs?

EDIHs primarily provide support to **SMEs, mid-caps and public sector organisations** that need help with their digital transformation.

Where are EDIHs located?

The 169 EDIHs and 76 Seals of Excellence are spread **throughout Europe, including** Albania, Kosovo, Montenegro, North Macedonia, Serbia, Norway, Iceland, Liechtenstein, Türkiye, and Ukraine. The goal is to have a **regional presence** of skilled teams that are familiar with the **local language and innovation ecosystem**.



Map of existing EDIHs and Seals of Excellence

European Digital Innovation Hubs

Seal of Excellence

Funding

The Commission committed digital investments of more than €100 million per year to co-finance EDIHs for their first three years, resulting in an operating budget of approximately **€200 million per year.**

Other financing includes funds from Member States or regions, or European programmes such as the Recovery and Resilience Facility, the European Regional Development Fund (ERDF), and payments for services by the clients.

EDIHs and a reinforced AI focus

EDIHs with an AI focus already support businesses and public sector organisations to do more with AI. Starting in 2025, all EDIHs will be required to have further AI competences to accelerate the development of the EU as an AI continent.

How will EDIHs collaborate with other AI innovation infrastructures?

Each EDIH will serve as an **access point to the entire EDIH Network,** helping local companies and/or public actors receive support from other EDIHs when required competences fall outside their remit, while also **offering their specialised expertise to companies and public actors from outside their region when referred through their respective EDIHs.** This ensures that every stakeholder gets the necessary support, wherever it is available in Europe.

EDIHs will collaborate with the EU AI innovation infrastructures (notably the AI Factories, TEFs, AI regulatory sandboxes, and the AI-on-Demand Platform) and will become a central point for companies and the public sector, ensuring a flexible and seamless digital journey and **referring them to the services provided by these AI innovation infrastructures, where appropriate.**

This collaboration does not mean that EDIHs need to integrate a representative of each EU AI infrastructure into their own consortium. It means that EDIHs must **map out these infrastructures, establish contacts with them, and help their customers benefit from the services provided by the other initiatives from a client journey perspective.** These collaborations will not only accelerate the deployment of AI technologies but also ensure that these technologies are applied effectively and ethically. EDIHs will play a pivotal role in bridging the gap between AI research and real-world applications, driving economic growth and improving public services across Europe.

What is the AI Service Desk and how will it be linked to the EDIHs?

Starting in 2025, EDIHs will offer **first-line assistance on AI Act** related questions to businesses and public sector organisations, in close link to the AI Act service desk being set up by the AI office. For this purpose, they will further **coordinate with the Digital Transformation Accelerator (DTA).**

Learn more about EDIHs: Home | European Digital Innovation Hubs Network

Testing and Experimentation Facilities (TEFs)

What are TEFs and what do they do?

TEFs are **specialised large-scale reference sites** which help innovative technology providers bring their **product from lab to market.** This includes support for **full integration, testing and experimentation of the latest mature AI technologies.**

TEFs can also contribute to the implementation of the AI Act **by supporting AI regulatory sandboxes** for supervised testing and experimentation.

Why were TEFs created?

TEFs were created to **bring trustworthy AI to market** more quickly and improve its uptake in EU Member States and Digital Europe Programme associated countries.

Who can benefit from TEFs?

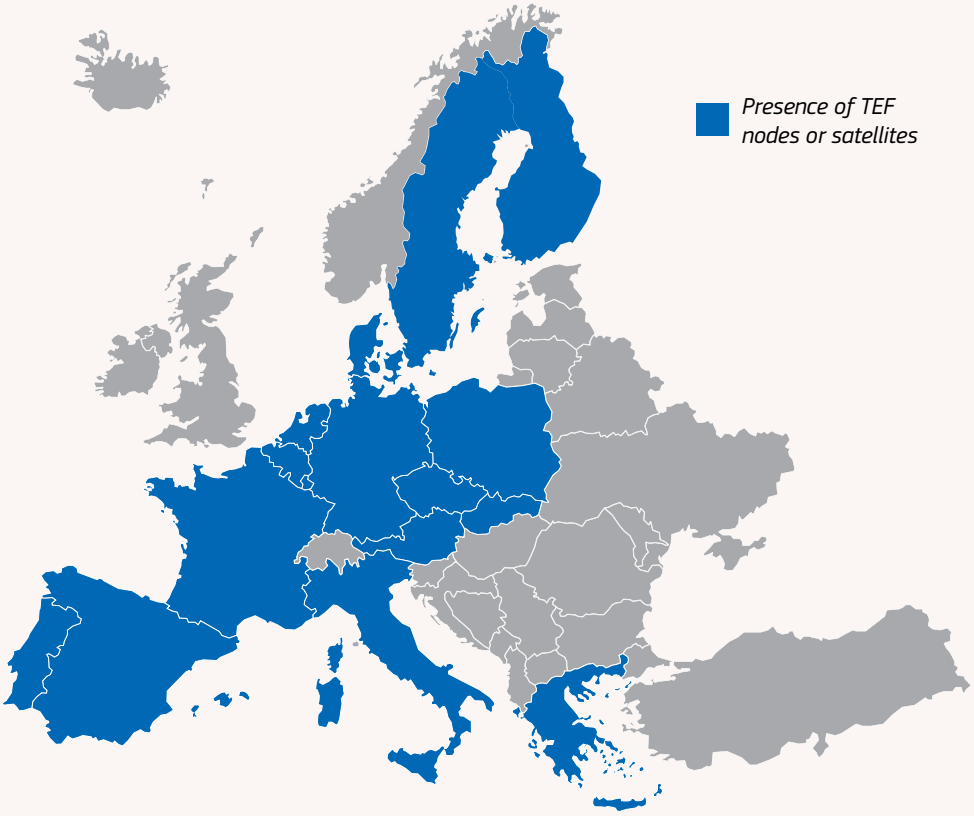
TEFs offer support to **European technology providers** who want to test their latest AI-based software and hardware technologies at scale in **real-world environments** (Technology Readiness Levels 6-8).

Where are TEFs located?

The four TEFs, which specialise **in Smart Cities and Communities, Health AI and Robotics, Agrifood, and Manufacturing Innovation,** are spread across multiple locations (named nodes or satellites).

In total, there are TEF locations in **16 EU Member States.**

The full list can be found on the website (see bottom of the page).



Funding

Each TEF has a budget **between €40 and €60 million.**

Half of these funds come from the Digital Europe Programme, and the remaining half from other sources such as EU funds, national or regional public funding and/or their own resources.

Learn more about TEFs on the dedicated website: Sectorial AI Testing and Experimentation Facilities under the Digital Europe Programme | Shaping Europe's digital future

AI Factories

What are AI Factories and what do they do?

AI Factories are specialised facilities designed to provide the **supercomputing capacity** for the **development and training of advanced AI models.** The factories will also foster talent development with **advanced education, training, skilling and reskilling activities** for relevant AI stakeholders.

Why were AI Factories created?

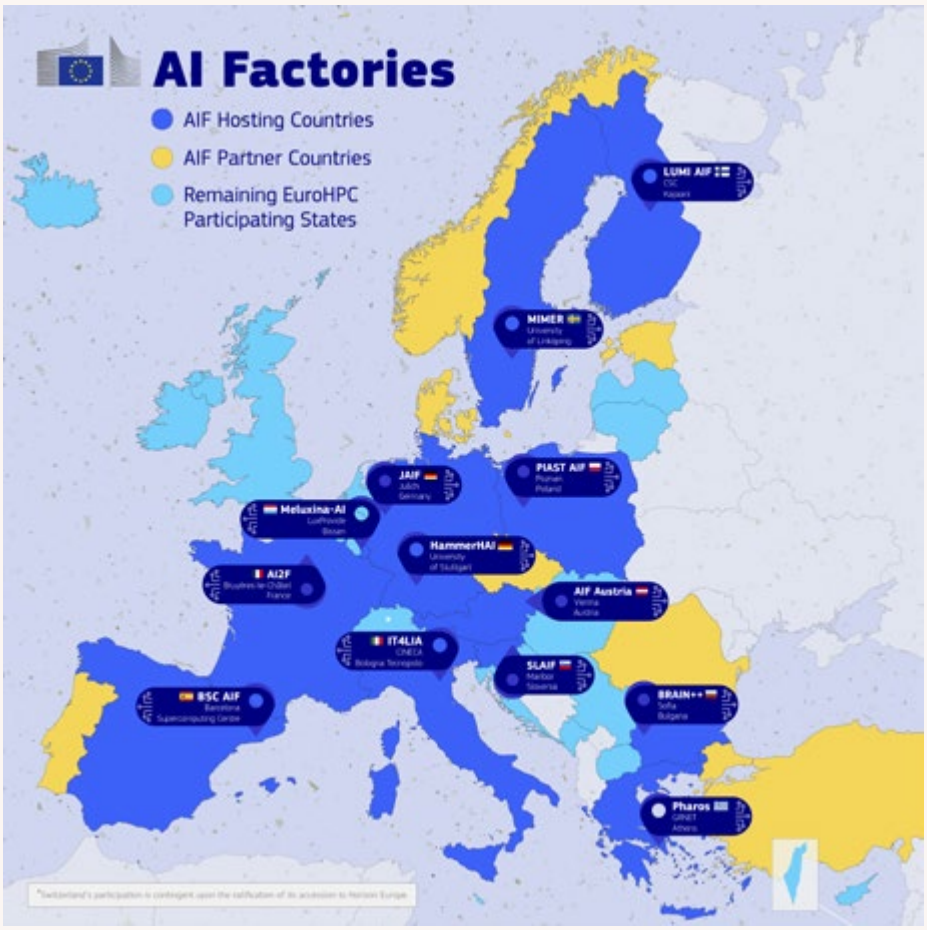
AI Factories were created to use the EU's supercomputing capacity to allow start-ups developing **trustworthy AI** to train their models.

Who can benefit from AI Factories?

AI Factories are dedicated to both **start-ups** and the **research ecosystems.**

Where are AI Factories located?

AI Factories are disseminated **all across the EU.** Each AI Factory can serve multiple countries, as currently 17 EU Member States and two associated EuroHPC countries are involved.



Funding

The total investment in supercomputing infrastructures and AI Factories in the EU will reach **EUR 10 billion** over the period 2021-2027.

What are the differences between AI Factories and AI EDIHs?

AI Factories are upstream services focused on **developing and refining AI tools** using high-performance computing resources for advanced models. They cater to **AI start-ups and researchers.**

In contrast, AI EDIHs are downstream services that aid in **implementing these tools** in organisations, such as **SMEs, mid-caps and public sector organisations.** EDIHs provide training and technical expertise to integrate AI into operations, ensuring practical applications.

Together, they create a **complementary ecosystem** where AI Factories develop tools that AI EDIHs implement for broad use.

Learn more about AI Factories: AI Factories | Shaping Europe's digital future

AI regulatory sandboxes

What are AI regulatory sandboxes and what do they do?

AI regulatory sandboxes offer a **controlled environment** for innovators to test AI systems under the national competent authorities' supervision, providing **regulatory guidance and learning,** while fostering innovation and competitiveness.

Why were AI regulatory sandboxes introduced?

AI regulatory sandboxes were introduced to help stakeholders **navigate EU and national laws,** offering guidance and insights for better future legislation. They **mitigate non-compliance risks** by allowing AI systems to be tested in controlled environments, and **support innovation**. Moreover, they enhance trust and **attract investment** in the AI sector.

Who can benefit from AI regulatory sandboxes?

AI regulatory sandboxes are open to providers or prospective providers of innovative AI systems, particularly **start-ups and SMEs.**

Where are AI regulatory sandboxes located?

AI regulatory sandboxes are located at the national level. By August 2026, **every Member State should have at least one AI regulatory sandbox.**

Funding

AI regulatory sandboxes will be financed through **national or other funds.**

What are the links between AI regulatory sandboxes and EDIHs?

AI regulatory sandboxes are an integral part of the EU AI ecosystem. Thus, EDIHs will **closely collaborate** with them to ensure a flexible journey for European companies to benefit fully from AI innovation infrastructures.

What are the differences between AI regulatory sandboxes and TEFs?

AI regulatory sandboxes and TEFs have **complementary roles** in advancing AI innovation.

TEFs are **permanent facilities** designed to test mature AI systems in **real or close-to-real conditions** within specific sectors, offering technical support and a physical environment. AI regulatory sandboxes are initiatives led by national authorities, allowing for experimentation with innovative AI systems under **regulatory supervision.** They provide legal guidance and flexibility to address uncertainties. The distinguishing factor of sandboxes is the involvement of authorities who help navigate legal landscapes. TEFs, with their AI expertise, **can assist in setting up these sandboxes,** enhancing the services and support offered to innovators. Both work together to support innovation, with **TEFs focusing on technical aspects and sandboxes on legal issues,** helping bring AI products from lab to market in targeted sectors like health and manufacturing.

Learn more about AI regulatory sandboxes: EUSAiR Project

AI-on-Demand Platform

What is the AI-on-Demand Platform (AIoD)?

The Platform provides access to a comprehensive ecosystem of **AI assets,** including **algorithms, AI models** (such as European LLMs), **tools, expertise,** and a **business navigator** exploring Europe's AI landscape with the overall aim to foster collaboration and transformation through AI. **Key features** include a **unified interface** for exploring and importing datasets, customisable AI models, and an open-source environment for experimentation. The Platform also supports seamless deployment of AI models and access to high-performance computing (HPC) and cloud resources, enabling scalable and efficient AI development and innovation.

Why was the AI-on-Demand Platform created?

The Platform aims to tackle a major challenge faced by scientists, researchers, and innovators: identifying **reliable, AI assets such as datasets and models.** Ultimately, the goal is to increase AI uptake, by offering the deployment of AI models through the Platform.

Who can benefit from the AI-on-Demand Platform?

The Platform is designed for **everyone** interested in **exploring, testing,** and **deploying AI solutions.** It supports researchers, innovators, and tech enthusiasts experimenting with AI, as well as businesses, public sector organisations, and individuals implementing AI into workflows. It offers both low-tech users and specialists the tools to customise, deploy, and scale AI solutions.

Funding

The total funding of the Platform including services and AI assets will be **€89 million.** These funds stem from the Horizon 2020 Programme, Horizon Europe and Digital Europe.

Access the AI-on-Demand Platform: Home Page | AI-on-Demand

Upcoming – AI Skills Academy

What is the AI Skills Academy?

The AI Skills Academy will be designed to support and develop educational and training schemes with a focus on skills for the uptake and deployment of AI (particularly GenAI) in key economic sectors, as well as skills related to the AI Factories facilities. It will leverage the collaboration between industry, higher education, and vocational training institutions. Its mission is to **upskill and reskill students and professionals and facilitate their positioning in the EU labour market** through various initiatives. These include educational courses, hands-on trainings, and an AI apprenticeship programme. The ultimate aim is to prepare a pipeline of **AI specialists** to work in the EU's key industries and the public sector. Furthermore, the Academy will establish AI fellowships allowing international and European PhD researchers and young professionals living in third countries to work in EU-based entities. The AI Skills Academy will also foresee scholarships and returnship schemes, especially for women.

Why will the AI Skills Academy be created?

The AI Skills Academy will be created to **increase AI expertise** in the EU, ultimately **fostering the uptake of AI.** Thus, the academy will play a vital role in meeting the **Digital Decade policy programme's skill targets,** which include reaching 20 million ICT specialists in the EU workforce and establishing gender convergence in ICT careers by 2030.

Who can benefit from the AI Skills Academy?

The AI Skills Academy is open to **students and professionals in the EU** who are willing to develop AI related skills.

Funding

The AI Skills Academy will be co-funded by the **Digital Europe Programme.**

AI Skills Academy in GenAI: EU Funding & Tenders Portal

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