

# Europe launches massive AI test facilities

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Artificial intelligence has entered the public sphere. The term AI is everywhere, and millions of Europeans use the technology every day, often without even realizing it.

But who will oversee these new technologies? And how do we know if

the AI we are using works as intended and can be trusted?

To ensure that the advent of AI doesn't conflict with European values and the 450 million EU citizens, the European Commission, more than half of the Member States and 128 partners have allocated €220 million to establish four world-class testing and experimental facilities, called TEFs, around Europe.

These TEFs will act as filters and safeguards between technology providers and society to ensure that the EU remains the place where AI excellence thrives—from lab to market—in a trustworthy manner for every citizen in Europe and beyond.

June 27 is the official launch date of the initial four physical and virtual testing facilities across Europe, abbreviated at the launch event as xTEF. The launch takes place in Copenhagen, Denmark.

The launch is hosted by CitCom.ai—the TEF for Smart Cities and Communities, which is a collaboration between 33 partners in 11 countries, led by the Technical University of Denmark (DTU), in close collaboration with the Confederation of Danish Industry (DI) and TEF DK, a non-profit industry organization of TEF providers.

"We have the best European partners who possess great knowledge and experience in working with useful and responsible AI. Through years of collaboration, we have established the necessary knowledge and expertise to match other global regions and have created an ecosystem where we learn from each other very quickly. This is now becoming even more operational," says Martin Brynskov, CitCom.ai lead and coordinator, and Director of Connecting Communities Center at DTU.

## **What is a TEF?**

TEFs are permanent facilities in the European Union where complex digital technologies can be tested in real-world settings, physically and through simulation: from robots and [artificial intelligence](#) to networking protocols and data processing and management.

The easiest way to understand what the TEFs do is to look at them as a sort of safety filter between emerging digital technologies—such as AI, robotics, quantum etc.—and European citizens and beyond.

This filter—the initial four TEFs—tests these technologies in real-life settings and so-called "living labs" before they reach infrastructure, society, companies, and consumers. The filter aims to turn complex technology with pointy ends into something softer and more society- and human-ready. Into good products.

"Providers of AI-driven solutions get the opportunity to test their products in real environments to assess if they meet the customer needs," says Valentina Ivanova, project coordinator of AI-Matters, the TEF on Manufacturing.

"By offering access to testing and experimentation infrastructure across Europe, we aim to accelerate the uptake of these solutions in the market."

That's what one might expect from any other sector, but these technologies are new, so the TEFs are setting up new and permanent ways to bring AI solutions safely and swiftly to market.

One could also look at the TEFs as a digital version of the Euro NCAP (the European New Car Assessment Program) crash test system, which tests the safety of vehicles today.

## **Four testing facilities handle different areas**

The current TEFs each cover distinct areas: manufacturing, health care, agriculture and food, and finally, cities and communities.

- The [AI-Matters](#) TEF aims to increase the resilience and flexibility of the European manufacturing sector by deploying the latest developments in AI and robotics and intelligent, autonomous systems for flexible production.
- The [TEF-Health](#) concerns the health care sector, from machine learning in medical imaging to complex brain simulations and robots for intervention and rehabilitation. Sensitive health data and medical products are in focus. TEF-Health helps companies bring their products to the market with the highest levels of trustworthiness and compliance with European values and regulations.
- The [agrifoodTEF](#) deals with the agricultural sector and food production, which could be everything from testing a robotic tractor to using artificial intelligence to optimize crop production.
- The [CitCom.ai](#) TEF is a bit different. With an initial focus on power, mobility and connectivity, its job is to test AI and robotics before they get into places where humans live and move around. This could be self-driving cars, but it could also be telecommunications data retrieval software or a robotic tractor in a municipal park. CitCom.ai works as a cross-domain filter between technologies, infrastructures, and citizens where they live.

TEF-Health lead and coordinator Professor Petra Ritter from Charité University Medicine Berlin and the Berlin Institute of Health says, "TEF-Health will support SMEs and start-ups to bring Health AI and Robotics Innovations to the market. With 51 partners on board—including notified certification bodies and metrology authorities—TEF-Health strives for novel solutions that speed up the process of turning

innovations into trustworthy products that benefit patients."

The idea is to be able to hit the throttle and the brake pedal optimally at the same time. The TEFs ensure that the EU adopts the best technology solutions to end up with good competitive products without sacrificing societal goals.

"Today, we face many challenges related to food security and climate change that no single organization can face alone. AgrifoodTEF wants to help bridge the gap between the excellent innovation emerging from European technology scientists and agronomy experts and the solutions that bring tangible results to the farmers. Real-life experimentation and validation services are key to facilitate AI and Robotics adoption that delivers more efficient and sustainable food productions," says Raffaele Giaffreda, agrifoodTEF Coordinator from Fondazione Bruno Kessler.

Other than being a filter to provide testing and approval as a service, the TEFs will also inform policy and provide feedback from the real world.

Regulators will make use of the testing and experimentation at the facilities, and policymakers can look over the shoulder of the TEFs and make more informed decisions about the safe and proper use of AI technology. This helps ensure that they create safe, inclusive, sustainable, and prosperous conditions for EU citizens and optimal opportunities for European technology providers competing responsibly in a global market.

The four testing facilities will be open for business by January 2024, with some services starting already in July 2023.

Provided by Technical University of Denmark

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