European Trustworthy AI Association

Empowering European Industry with Trustworthy AI engineering

Executive summary - November the 7th, 2025

Trust is key to Industrial AI

Artificial Intelligence displays tremendous potential to transform industries, by unlocking radically new levels of automation and performance. Organizations rush to do pilots and explore how to use AI in their products, services and operations - as the technology may redefine the terms of productivity and competition.

The technology consists of fairly generic algorithms trained with massive amounts of data. AI delivers impressive results, quite often, not always : to what extent can it be relied upon ? The quality of decisions that AI-based systems make heavily depends on the data that was used to train them, and new validation approaches are needed.

This is not always a problem, typically for the large variety of use cases when the impact of errors are negligible, or when the AI essentially produces drafts to accelerate the work of experts who carry the ultimate responsibility over outcomes.

But it's a different story when AI is planned to be used in systems with high degrees of autonomy and a wrong decision can lead to major harm or economic damage.

Industrial companies have experience dealing with risks. If they can't afford to miss the opportunities of AI, they can't afford to use it without widsom and mastery. Similarly to what happened with Software at the end of the 1960s, they need state of the art AI Engineering methodology.

At a more macro level, it is understood that AI is becoming a defining technology for economies and geopolitical powers. Europe sees the importance of building the conditions of its strategic autonomy and mastery on AI - not only as a user, but also as a builder of AI systems. This starts with the knowledge and skills on how to design and build AI in systems in a way that aligns with its policies and values, and this also demands strategic management of dependencies regarding the necessary infrastructures, tools and components.

Europe's lighthouse on Trustworthy AI Engineering

In 2025, a collective of industrial companies, research labs, deeptech startups, have joined forces from across Europe & beyond (Canada, Japan), to found and operate the European Trustworthy AI Association.

The association is a non-profit organization on a mission to empower enterprises and industry to build & run AI systems in production, in a way that earns the trust of all stakeholders - colleagues, customers, and the broader societies around.

To that aim, the association delivers an open, reference, state of the art methodology and toolbox, that engineering teams can use throughout the entire product lifecycle, from inception to operations.

The association is taking the lessons from the software era: at end of the 1960s, software went out of the lab, to be massively adopted by enterprises. Without defined processes and methodolgy, with systems growing in complexity, this resulted in what was coined as "the Software Crisis": systems were unreliable, quality, costs and delays were out of control.

In 1968 and 1969, NATO's scientific council organized two "Software Engineering Conferences": international experts on computer software agreed on defining best practices for software grounded in the application of engineering. This initiated a sequence of methodologies (waterfall, V cycle, RUP, Scrum, Safe...) that turned software into the pervasive reality we know today.

Similarly, trustworthy AI is only possible if engineers know what it is and how to build it. For this, a methodology needs to exist, and evolve, based on state of the art scientific results, and also based on the experience and learnings from practitioners. Tools need to be created and maintained, with which engineers can put the methodology in practice. Then Engineers need to have the opportunity to learn and be trained, during their initial curriculum and throughout their professional career.

To make this happen, the association with its members are building a lighthouse for Trustworthy AI engineering in Europe and beyond, with a strong science-based portfolio as foundation, and a strong ecosystem to keep it up to date and make it shine.

An open source methodology and portfolio

The association has built its initial portfolio with the assets resulting from the flagship industrial research program Confiance.ai. After four years of research, the program funded by the French government and major industrial companies has delivered an extensive body of knowledge, an end to end methodology extending an established engineering standard, more than 130 methodological guidelines and 50 engineering tools. These resources have been applied and validated over a dozen industrial use cases in different domains: object detection for autonomous driving, autonomous landing, time serie analysis for predictive maintenance, automated non-desctructive inspection of manufacturing results, sentiment analysis from social media activity, etc.

The association is making the methodology and the software tools available with open source licenses, to make them easily accessible to all, to guarantee freedom of use, to create the conditions for trust and cooperation at scale. The association has started to mature and maintain these assets, and delivers new releases in order to meet the needs and priorities of industrial engineering teams within its members' organizations. It is also providing expert support to these teams as well as training services. Last but not least, it provides a framework through which the costs of these activities are mutualized.

Already, the association is preparing the roadmap and the next iteration of the methodology, together with its scientfic members, i.e. research labs from across Europe who lead programs on next trustworthy AI challenges. The effort is not unlike Sysiphus': the rapid and constant emergence of new AI techniques (e.g. generative AI) create appetite for new enterprise use cases, that come with new trust challenges, for which more research is needed.

An innovation ecosystem aiming for impact

The association acts as a platform for a diverse ecosystem of members who use, and possibly contribute to the portfolio, and who generate mutual value through cooperation.

- enterprises and industries are the primary users of the methodology and tooling, they bring use cases, challenges, and feedbacks from experience.
- technology providers position their offering and use open building blocks as part of their solutions
- research labs access industrial challenges to tackle, partners to work with, and a consolidated channel for dissemination of results towards the engineering community and industry
- education actors build training curriculums, and deliver trained specialists
- standardization actors find a consoliated scientific baseline to build standards on, and possibly help lower the costs of future compliance through early alignment

- certification actors find resources to evaluate systems, and industrial partners with whom to run pilots and build experience, ahead of standards

The association actively animates this ecosystem and organizes monthly meetups, scientific seminars, learning webinars (Digital Factory Day) and a flagship event - the Trustworthy AI Summit taking place across Europe.

One of the key ecosystem animation initiatives that the association organizes consists of open science challenges built around industrial use cases, with a provided dataset, intended purpose, and trust objectives. For the latter, the industrial sponsor chooses meaningful trust attributes and metrics from which to derive an aggregate trust score. The latest example is the Welding Quality Detection Challenge, provided by a major European car manufacturer: running over few months, the challenge provided the context for an open international community of scientists to achieve impressive progression of the aggregate trust score (from 30 to 85) as a result of more than a thousand submissions.

It also organizes and structures cooperation in working groups with specific purposes. For instance, the scientific workgroup builds the scientific roadmap of the portfolio together with research labs, the standardization workgroup maps the standardization landscape and organizes contributions (notably to ISO and CEN-CENELEC), the industrial workgroup seeks to support the deployment process within enterprises and capture needs or challenges, etc.

In addition, the European Trustworthy AI Association liaises and cooperates with other major European associations and initiatives, in order to develop synergies as much as possible by positioning as a focused and complementary force: the AI, Data and Robotics Association (ADRA), the Big Data Value Association (BDVA), and the AI on Demand Platform (AOID).

The journey

The European Trustworthy AI Association was created in Brussels as an AISBL (international non profit association) in September 2025, after a one year incumbation program led by Air Liquide, IRT SystemX, Naval Group, Safran, Sopra Steria and Thalès, and supported by France2030. During that period, the model for the association was defined and experimented: four quarterly program increments were delivered featuring about 30 open source product releases, a membership model was set up. More than 30 organizations joined and started to participate: they are AI research labs in Belgium, Germany, Norway, Netherlands, Greece, Canada, United Kingdom, France ; they are companies from different line of business: defence, industry, services, education, certification, and deeptech startups.

In 2026 the association will continue the take-off: it will focus on scaling membership across Europe and beyond, developing the portfolio with new assets from members, supporting users, contributing to standards, and integrating further with EU strategy and initiatives.

Call for participation

If the mission of the association resonates with the needs or the objectives of your organization, we invite you to connect through our web site. We are looking forward to exploring with you what meaningful cooperation opportunities could exist !


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