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PRESS RELEASE

Confiance.ai: a partnership between 13 French companies and research organisations who are taking up the challenge of industrialising artificial intelligence (AI) for critical products and services.



- The "Grands Défis" are public investment programmes aiming to develop breakthrough technologies and innovations with a strong social and economic impact. The aim of the Great Challenge "Ensuring the security, reliability and certification of systems based on artificial intelligence" is to build the process, methods and tools to guarantee the trust placed in products and services that integrate artificial intelligence (AI), and thus to provide a "technical" framework for the future European regulation proposal on AI.
- In the near future, trustworthy AI technologies will be at the heart of the design and production of major and diverse products and services such as autonomous vehicles, next-generation aeronautics, industry 4.0, energy and defence.
- With an allocated budget of €45M for the period 2021-2024, Confiance.ai aims, through a collective endeavour of 13 major French industrial and academic partners, to create a platform of methods and tools that will enable the integration of AI into critical products or services, i.e. where accidents, failures or errors could have serious consequences for people and things.
- Confiance.ai mobilises French expertise in artificial intelligence, as well as in engineering and operational safety, in order to provide industrial companies with solutions that enable them to develop new products and services based on trusted AI, and thereby responding to major challenges in terms of society, economic competitiveness and sovereignty.

Paris, on 1st July 2021

The question of the safe and reliable operation of software is at the core of many everyday applications, whether in transport (automotive, aviation, rail, etc.), health devices, or operators of vital importance. The rapid spread of artificial intelligence (AI) software in all sectors of activity thus raises specific questions in terms of guarantees on its "proper functioning". Whether we are thinking of the safety of "autonomous" decision-making in real time, as in the case of the autonomous vehicle, or of fields that do not tolerate decision-making errors (security, justice, health diagnosis, etc.), or of expectations of fair treatment that require a guarantee that

treatments are not biased, the trust placed in products and services incorporating AI must be developed.

As part of the *Grand Défi* "ensuring the security, certification and reliability of systems based on artificial intelligence" promoted by the French government and headed by Julien Chiaroni (Secretariat-General for Investment), the Confiance.ai programme brings together a group of 13 major French industrial and academic partners: Air Liquide, Airbus, Atos, Naval Group, Renault, Safran, Sopra Steria, Thales and Valeo, as well as the CEA, Inria, IRT Saint Exupéry and IRT SystemX.

They are all united by the same ambition and are combining their strengths and skills to industrialise and integrate trusworthy AI into critical industrial products and services of the future, i.e. where accidents, breakdowns or errors could have serious consequences for people and objects. IRT SystemX has been entrusted with setting up and managing the programme.

"These technological developments are a prerequisite for trustworthy, ethical and responsible AI in France and in Europe. Thanks to the excellence of its research in mathematics, artificial intelligence, engineering and functional safety, France has undeniable assets to meet this challenge. It is the combination of these three strengths that the Confiance.ai programme capitalizes on. It thus proposes to provide a technical "framework" for the proposed European regulation on AI", explains Julien Chiaroni, Director of the Grand Défi "Trustworthy AI" within the Secretariat-General for Investment.

At the programme's launch event on 1 July, held in Valeo's new R&D centre dedicated to the self-driving vehicle of "Valeo Mobility Tech Center", Jean-Baptiste Djebbari, Minister Delegate in charge of Transport, said:

"France is now adopting a complete regulatory framework for the circulation of autonomous vehicles: this is a first in Europe. And we therefore need more than ever before a safe, high-performance and certifiable AI. This is the objective of Confiance.ai, the largest R&T programme of the national strategy for Artificial Intelligence that was launched by the French President in 2018 and backed by €30M funding from the Future Investment Programme. I am delighted that industrial companies from different sectors are collaborating on this great challenge."

Cédric O, Secretary of State for Digital Transition and Electronic Communications, welcomed the progress of this project : "*Trustworthy AI*, that is to say, AI for critical systems, is now an essential feature in many fields such as autonomous cars, aeronautics and spatial technology. The progress of this project testifies to the success of the National Strategy for Artificial Intelligence and reaffirms the need for public investment in advanced technologies."

Designing a software tool platform for trusted AI

Over the period 2021 to 2024, this multi-field collective will design and propose a platform of sovereign, open, interoperable and sustainable methods and tools that will enable AI to be integrated into critical products and services in a safe, reliable and secure manner.

Dedicated to the engineering of innovative industrial products and services integrating artificial intelligence, this platform will provide methods and software tools for the design, validation, qualification, deployment and maintenance of products and services based on artificial intelligence. It thus aims to reduce the development costs of these products and services while guaranteeing their "proper" functioning.

The first application sectors will be the automotive, aeronautics, energy, digital, industry 4.0, defence and maritime sectors, with a variety of applications such as on-line industrial control, autonomous mobility and decision support systems.

A challenge for society, economic competitiveness and sovereignty

Confiance.ai meets the challenges of social acceptance, industrial competitiveness and national sovereignty.

All over the world, users, citizens, authorities and regulatory, licensing or certification bodies expect these new products and services to be safe, reliable, ethical and trustworthy. Similarly, the robustness, reliability and safety of critical Al systems will be essential to enable their

transposition onto the industrial scale. Thus, the ability to explain the decisions suggested by the algorithms or to provide proof that they work "correctly" will soon become crucial.

Technological solutions for the certification, reliability, evaluation, transparency and auditability of algorithms will guarantee a high level of trust in future AI solutions for the industry. Mastering these technologies represents a strong issue of digital sovereignty but also the ability to implement the future European regulation on AI.

Technological pillar of the *Grand Défi* dedicated to trustworthy AI benefiting from a $\epsilon_{45}M$ investment, Confiance.ai is to date the most endowed technological research programme of the national #AlforHumanity strategy aiming to make France a leading country in artificial intelligence. It is in line with the "Manifesto for artificial intelligence at the service of industry" signed in July 2019, by French industrialists committed to "making AI a source of growth and employment in their industrial sectors". 6 of these major groups are part of the Confiance.ai programme.

A collective and multi-sector strategy

The Confiance.ai programme reflects the Grand Défi's ambition to bring together major players in research and industry in order to adopt a collective multi-field strategy. More than 300 full-time equivalents (FTE) are mobilised on two project platforms in Saclay and Toulouse.

This ambition was built jointly over a period of 9 months and has been materialised in the form of a strategic roadmap. It is structured around five main areas: AI characterisation, trusted AI by design, data and knowledge engineering, mastering AI-based system engineering, and trusworthy AI for embedded systems.

"The challenges of integrating artificial intelligence into critical systems are immense and the expectations of French manufacturers are high and must be taken into account now. There are many demonstrators, but industrialising them for critical applications in industrial systems represents a major challenge. The Confiance.ai programme is in synergy with existing initiatives (DEEL, ANITI, DATAIA, MIAI and IA2), and brings an additional level of integration due to its strong industrial orientation", explained Emmanuelle Escorihuela, President of the Confiance.ai programme steering committee.

Work on the Confiance.ai programme first began in January 2021. The timetable foresees the delivery of integrated technological building blocks each year, while ensuring that the transferable assets to the consortium's industrialists will be developed as soon as the first results are available.

The Confiance.ai programme aims to have a strong international scope, which it is already building with Quebec, where a complementary programme is being developed, and a reinforced cooperation on standards with Germany.

A CFP to integrate start-ups and innovative SMEs

A <u>call for expression of interests</u> was launched on 1 July 2021 to invite integrations from start-ups and innovative SMEs, whose technologies are likely to contribute to the resolution of the technological barriers of the programme. These challenges concern the following three topics: trust and system engineering with AI components, trust and learning data, trust and human interaction. Results are expected by **3 September at 12:00 pm**. Once the selection process is complete, the selected start-ups and SMEs will be able to commence their work in the 4th term of 2021.

Media relations

Marion Molina – Claire Flin Tel. 06 29 11 52 08 / 06 95 41 95 90

marionmolinapro@gmail.com / clairefline@gmail.com