

Airbus position on the EU White paper on Artificial Intelligence

Airbus reiterates the importance of the digital transformation for the aerospace, Earth Observation and defense supply chain, its willingness and ability to contribute proactively to EU initiatives. We strongly support the EU strategy for data and AI, and agree on the need for an EU level ambitious action, coordinating successfully the Member States policies and actions. Digital and AI can contribute to develop our competitiveness on a worldwide stage, further integrate our activities above boundaries. We remain at the Commission's disposal to further exchange on all elements. Nathalie Errard (nathalie.errard@airbus.com), will be the point of contact to organize the discussion with relevant stakeholders in AIRBUS.

With respect to AI, Airbus' ambition is twofold:

- First, to be an AI driven company supporting adoption of AI at a competitive pace to create value in all aspects of our business thus contributing to maintaining our position in the worldwide competition.
- Second, to be a world leader in Safe and Trustworthy AI to rely on AI for (safety) critical applications linked to future concepts such as Single Pilot Operations, Future Combat Air System, Urban Air Mobility,...

Complementary to our answers to the online questionnaire we want to provide the following comments and recommendations.

AI a European approach to an ecosystem of excellence

Airbus supports the development of an ecosystem of excellence. At national level, cooperation with Member States is key and convergence and coordination between them proves to be fundamental. Airbus is directly involved and benefitting from AI national initiatives such as 3IA institutes in France and is orienting research on Safe, Trustworthy and embedded AI for example in ANITI. At European level, focusing the efforts of the research and innovation community is indispensable. A federated approach enabling efficient collaboration between the existing European AI research excellence centers should be favored. Creating a new central one would prove difficult. The coordinated network would require a smart governance structure, allowing efficient cooperation, alignment on a shared vision and priorities, maximizing the new co-funded research opportunities which will be made available across the future Horizon Europe framework programme.

AI a European approach to an ecosystem of Trust

- **Artificial Intelligence and Risks : recognizing positive impacts of AI and seizing the opportunities ahead**

If AI, as any other new technology, can create new risks, it can as well be used to minimise these risks. AI could endanger safety if it was misused, i.e. managed as a huge 'black box'. However, we consider that such risks would be removed by proper engineering of safety critical systems, deployment of appropriate architectures and relevant monitoring and redundancies.

Quite to the contrary, the appropriate use of AI could improve safety by solving problems in critical situations which are beyond human capabilities.

For instance, in future scenarios such as urban air mobility, autonomous flying taxis could resort to AI to minimise risks rather than creating them.

- **Cumulative criteria for assessing high-risk applications : sector classification criteria could be detrimental to worldwide competitiveness**

As mentioned in Section1 §4B of the Commission White Paper, ensuring an ecosystem of excellence is key and we support the fact that EU efforts *“should concentrate in sectors where Europe has the potential to become a global champion such as industry, health, **transport**, finance, agrifood value chains, energy/environment, forestry, **earth observation and space**. In all these domains, **the race for global leadership is ongoing.**”*

We also agree with the proposed approach to introduce new compulsory requirements, limited to high risk applications. However we have some concerns with the cumulative criteria approach proposed to determine high risks applications. The proposed approach consists in first determining whether the sector of application is a High-risk one and, then, to assess if the specific AI application involves significant risks. The vast majority of AI applications inside Airbus are currently not targeting safety critical systems - this situation should not change tomorrow. Categorising transport/aviation globally as a high risk sector could slow down AI adoption and development, and therefore reduce our overall competitiveness on the worldwide stage. Earth observation and satellite Imagery is more of an opportunity than a risk as it most often is the only solution to extract objective and pertinent information.

We would therefore suggest to rely only upon the second criteria to assess the specific risk linked to the specific AI application.

- **Regulatory framework for AI high risk applications : adapting existing regulatory frameworks rather than creating new ones specifically for AI**

In terms of defining and assessing safety risks, airworthiness regulations already exist and are used to assess risk levels (minor, major, hazardous, catastrophic) and define associated and accepted precautions such as failure probability when relevant, design assurance activities . Such regulations are based on an **holistic assessment of the risks** that could arise from usage of many new and well-known technologies. **We are actively working together with Aviation certification authorities to update the existing regulatory framework to take into account AI specificities.** This ongoing work should not be duplicated and could be complicated by any overlapping regulatory initiative specifically launched for AI.

- **Human oversight requirement: flexible approach on human oversight requirements is needed, to accommodate alternative risk mitigation approaches for autonomous platforms.**

In §D.4.e the Commission Whitepaper states that *“human oversight helps ensuring that an AI system does not undermine human autonomy or cause other adverse effects. The objective of trustworthy, ethical and human-centric AI can only be achieved by ensuring an appropriate involvement by human beings in relation to high-risk AI applications”*.

Since the introduction of Fly by wire, algorithms are largely used to manage aircrafts controls. **Control laws are designed to manage situations that could not efficiently be managed by pilots.** AI could be used to improve control laws or help to achieve a better situational awareness. For example AI could be used to detect obstacles with computer vision to improve flight envelope protection. For such safety critical applications oversight will not be ensured by humans but by

comparison with other redundant algorithms. If anything is going wrong the systems will safely switch back to use classical control algorithms providing less but guaranteed performances. In some complex situations, giving back abruptly the control to the pilot is known to be a major risk as the pilot might not be in a position to react sufficiently rapidly, or could have a wrong understanding of the situation. Finally we should always take into account that Pilot could be incapacitated.

We want to highlight that a more flexible approach on human oversight requirements is needed, to accommodate alternative risk mitigation approaches for autonomous platforms. Oversight is needed but not necessarily through Human In The Loop approaches.