

A. NATO

22. AI is one of the nine technological priority technology areas for NATO (NATO, 2023). Next to AI, these emerging disruptive technologies are: autonomy; quantum; biotechnology and human enhancements; hypersonic systems; space; novel materials and manufacturing; energy and propulsion; and next-generation communications networks. AI is not only important in itself, it is also crucial for advancement in other areas, as it acts as a multiplier: “Of all these dual-use technologies, Artificial Intelligence is known to be the most pervasive, especially when combined with others like big data, autonomy, or biotechnology” (NATONews, 2021a).

23. In line with the logic that the development of AI and other emerging disruptive technologies will be driven largely by smaller companies, NATO has invested in a venture capital fund equipped with €1 billion. The NATO Innovation Fund (NIF) seeks to attract innovative startups by giving them access to test sites and by providing crucial funding to bridge the so-called valley of death before commercialisation. Moreover, the Defence Innovation Accelerator for the North Atlantic (DIANA) has recently expanded its network of available test centres (NATONews, 2024). This broadens the opportunities for innovative companies to use national organisations to connect with military end users. Such new mechanisms are part of efforts to forge new and more dynamic innovation ecosystem that should, over time, allow for the faster integration of AI into the defence sector.

24. In October 2021, NATO released its first AI Strategy (NATONews, 2021a), which attempts to position NATO as the leader of AI adoption in defence. Its unclassified summary emphasises the importance of AI for all three core tasks of NATO and reiterates the allies’ commitment to transatlantic cooperation on the development and use of AI in defence (NATONews, 2021b; Stanley-Lockman and Christie, 2021). Central to the Strategy are the six “NATO Principles of Responsible Use of Artificial Intelligence in Defence”, namely: lawfulness; responsibility and accountability; explainability and traceability; reliability; governability; and bias mitigation (see Box 2). As such, the Alliance is at the forefront of developing an ethical and lawful use of AI in defence.

25. While NATO’s AI Strategy is quite comprehensive, it remains in essence a set of guidelines, since most of the development and application of AI in defence takes place on the national level. Reportedly, the negotiations of the document revealed different Allied viewpoints – with some wanting greater granularity of the principles of responsible use, while others voicing concerns that overemphasising the normative approach risked “ceding technological advantage to peer competitors” (Soare, 2021).

26. In May 2022, the NATO STO and the NATO Communications and Information Agency (NCIA) launched an AI horizon scanning strategic initiative in order “to better understand AI and its potential military implications” (NCIA, 2022). In October 2022, Allies adopted a NATO Data Exploitation Framework, established NATO’s Data and Artificial Intelligence Review Board (DARB), and adopted NATO’s Autonomy Implementation Plan (NATONews, 2022a, NATONews, 2022b). In July 2023, Allies adopted NATO’s Digital Transformation Implementation Strategy, which seeks to link digital

transformation to capability-development goals and interoperability requirements (NATO News, 2023a).

27. In February 2023, NATO's DARB – a group that includes lawyers, engineers, military personnel and experts in ethics – started to develop a user-friendly and responsible AI certification standard “to help industries and institutions across the Alliance make sure that new AI and data projects are in line with international law, as well as NATO’s norms and values” (NATO News, 2023b). The standard will “translate” NATO’s Principles of Responsible Use “into concrete checks and balances, notably in terms of governability, traceability and reliability” (NATO News, 2023b). This will help to build trust among the innovation community, operational end users and the general public.

BOX 2:

NATO's principles of responsible use for AI in Defence

“A. Lawfulness: AI applications will be developed and used in accordance with national and international law, including international humanitarian law and human rights law, as applicable.

B. Responsibility and Accountability: AI applications will be developed and used with appropriate levels of judgment and care; clear human responsibility shall apply in order to ensure accountability.

C. Explainability and Traceability: AI applications will be appropriately understandable and transparent, including through the use of review methodologies, sources, and procedures. This includes verification, assessment and validation mechanisms at either a NATO and/or national level.

D. Reliability: AI applications will have explicit, well-defined use cases. The safety, security, and robustness of such capabilities will be subject to testing and assurance within those use cases across their entire life cycle, including through established NATO and/or national certification procedures.

E. Governability: AI applications will be developed and used according to their intended functions and will allow for: appropriate human-machine interaction; the ability to detect and avoid unintended consequences; and the ability to take steps, such as disengagement or deactivation of systems, when such systems demonstrate unintended behaviour.

F. Bias Mitigation: Proactive steps will be taken to minimise any unintended bias in the development and use of AI applications and in data sets.”

Source : https://www.nato.int/cps/en/natohq/official_texts_187617.htm