



A Strategy for NATO's Digital Future

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In the context defined by the 2022 Strategic Concept, the Atlantic Alliance has reiterated the need to strengthen its technological advantage as a key element for deterrence and collective defense. To this end, NATO has embarked on a profound digital transformation process, culminating in the **approval, in February 2025, of the *Data Strategy for the Alliance (DaSA)*** by the Atlantic Council. The strategy fits within the framework of the *Digital Transformation Implementation Strategy (DTIS)*, which aims to improve interoperability, situational awareness, and decision-making through the use of data.

The core of the strategy is the establishment of the *Alliance Data Sharing Ecosystem (ADSE)*, a system that enables secure and collaborative exchange of data resources, artificial intelligence (AI) models, and machine learning algorithms among Allies, industry, and academia. The goal? To make NATO a truly *data-centric* organization by 2030, capable of leveraging curated and reliable data through a data-literate workforce, optimized processes, and federated digital infrastructures.

Towards a Data-Driven NATO: Governance, Culture, and Interoperability

NATO's strategy defines five strategic objectives: robust data governance, valuing data as a strategic asset, *data-centric* security, personnel's analytical maturity, and the creation of a federated data-sharing ecosystem. Data governance will be led by the Digital Policy Committee, which will coordinate the adoption of common standards, data protection, and adherence to security, legality, and privacy principles. NATO will also adopt adaptive security measures, based on the origin and confidentiality of the data, to protect missions and individual rights.

To foster cultural transformation, **the strategy aims to train a workforce with cross-cutting data skills through tailored training paths for roles and teams.** This approach aims to build a widespread culture of data-driven decision-making, ensuring that every NATO member, civilian or military, can contribute consciously and effectively.

Interoperability will also be crucial: standardized metadata (NCMS - STANAG 5636), integrated catalogs, and web/API interfaces will allow users – human or automated – to access shared data securely and traceably. The strategy also foresees the adoption of the *Data Centric Reference Architecture* (DCRA), a framework that ensures scalability, quality, and adaptability of data, steering NATO towards a truly *data-driven* model.

Principles, Enablers, and Data-Centric Governance

The *Data Strategy for the Alliance* is based on **seven guiding principles: data must be discoverable, accessible, reliable, regulated, interoperable, shared, and secure throughout their lifecycle.** To ensure the operability of these principles, the strategy includes a series of *data enablers* that encompass governance, reference architectures, modern standards for interoperability, and talent development.

In particular, computational data governance will ensure quality, security, and compliance on a large scale; reference architectures will provide standards and technological recommendations to ensure efficient data use. The new NATO standards for semantic interoperability, based on defense and security-specific ontologies, will facilitate integration between humans and technologies such as AI. In parallel, the development of an agile data culture will be made possible by adequate training and the enhancement of personnel capable of leveraging data as a lever for change.

At the governance level, NATO has established a *Data Centric Governance Operating Model* to coordinate the implementation of the strategy and promote dialogue among data management leaders. The model includes the creation of dedicated committees both at the national level and within the *NATO Enterprise*, with operational support from the NATO Chief Information Officer's Office (OCIO). The *NATO Information Management Authority* (NIMA), in Alliance format, will serve as the CDO council, overseeing the adoption of data policies and standards.

In summary, NATO's data strategy represents a decisive step towards integrated and conscious management of data as a strategic resource. Through strengthening digital capabilities, workforce training, and creating a federated sharing ecosystem, the Alliance aims to consolidate its informational and operational advantage in an increasingly complex and competitive geopolitical context.