

CANSO EUROPE 2035 VISION

Priorities for Transforming
European Air Traffic Management



**SHAPING
OUR
FUTURE
SKIES**

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SAFETY is the number one priority of CANSO Members. Air navigation service providers (ANSPs) are customer-focused, forward-looking and agile in addressing future air traffic management (ATM) challenges, such as strong growth or sudden drops in air traffic, climate change, emerging airspace users and evolving risks such as geopolitical tensions and cyber-threats.

BY 2035 CANSO ENVISIONS THAT:

1. ANSPs act in the interests of their customers.



Any successful ANSP serves the interests of its customers, while considering those of its stakeholders and employees.

ANSPs deliver safe, efficient, reliable and predictable services to today's and tomorrow's airspace users according to rules set by the competent authorities. They ensure sufficient peak-hour capacity, minimised delays, and optimised flight trajectories. At the same time, they maintain the highest safety standards. ANSPs strive to deliver their services under all circumstances, even when faced with significant outside disruptions.

ANSPs also enhance cost efficiency and resilience, and support innovation, flexibility and defence needs. They help their customers to reach their climate targets by being environmentally responsible. In this context, CANSO has already set up GreenATM, an environmental accreditation programme to provide ANSPs with an independent, industry-endorsed, accreditation of their environmental efforts.

In response to the shifting geopolitical landscape, ANSPs are increasingly aligning with defence priorities. They address State requirements to provide critical infrastructure and essential services for both civil and military airspace users and for national security.

Open communication and transparency with their customers are key for ANSPs.

2. ANSPs play a fundamental role in integrating emerging airspace users in Europe.



ANSPs play an essential role in ensuring the safe and seamless integration of existing and emerging airspace users like drones, advanced air mobility (AAM) aircraft and high-altitude operations (HAO), as ANSPs already have the appropriate safety, airspace and air traffic management culture, expertise and skills as well as the means to implement the required services. The continuity of safe and efficient services for the IFR/VFR core customers is ensured.

Addressing the evolving demands and growing complexity of the aviation ecosystem calls for collaborative efforts from all involved stakeholders. This is exemplified by the CANSO-led global initiative of the Complete Air Traffic System Concept of Operations for Future Skies (CATS CONOPS).

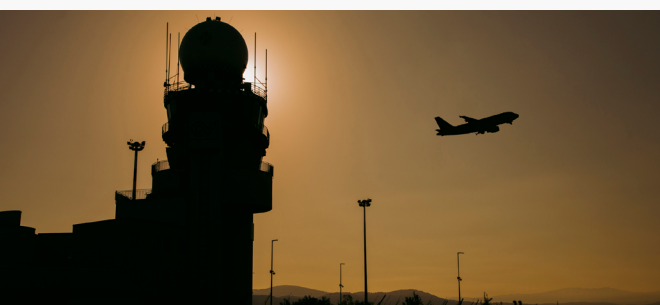
3. Air Traffic Services are delivered in an environment of trust and intensified collaboration.



The only way aviation can be successful is through strengthened collaboration among all stakeholders in the system. This involves enhancing existing cross-industry structures as well as developing new innovative partnerships.

CANSO strives for a collaborative and trustful environment that enables seamless coordination among all stakeholders, including ANSPs, airlines, airports, and regulatory bodies. By sharing real-time information and aligning operational objectives, collaboration enhances situational awareness, supports more efficient decision-making and fosters proactive responses to dynamic airspace conditions. Enhanced collaboration is also critical to the successful digital transformation of ATM to optimise traffic flows and minimise delays and to strengthen safety, sustainability, and overall system resilience.

In parallel, CANSO seeks enhanced cooperation of civil and military air traffic control organisations. This is a key strategic pillar to enable optimal utilisation of European airspace, accommodating the demand of all airspace users while respecting States' sovereignty over their airspace.



4. The Performance and Charging Scheme supports investment.



A reformed Performance & Charging Scheme enables ANSPs to invest in future technologies, in line with the ATM Master Plan, and skilled staff by focusing on investment in capacity. The new financing framework reduces the risk of under-investment by acknowledging existing policy and regulatory requirements and setting effective incentives. It provides for adequate and predictable funding by allowing more flexibility to adapt to unforeseen circumstances. ANSPs plan around controllable factors and are held accountable for these but not for uncontrollable ones. In this way, ANSPs can support the necessary technological innovation and staff recruitment and training in order to meet the expectations of airspace users.



6. Regulation evolves from being constraining to enabling.



Simplified and fit-for-purpose performance-based regulation can achieve more than trying to prescribe all aspects of the ATM – and UTM – system. Regulation needs to evolve to provide a supportive framework to foster necessary change addressing the challenges expected for the next decade and hence support and stimulate improvements in Network Performance.

Future regulation creates options and allows either the regulated entities or the competent authorities to decide which path to follow, taking into account local specificities. It is output-focused, rather than input-focused. It is designed to harmonise, create the right incentives for all players to support necessary change and reward early movers. It also encompasses the important role of standards to enhance regulatory effectiveness by promoting clarity and consistency and to ensure the required interoperability.

All regulatory change proposals are accompanied by robust impact assessments developed with wide stakeholder consultation and setting out the costs and benefits of the regulation to achieve buy-in and effective implementation.

5. Network management supports and facilitates the capacity needs of all operational stakeholders in the network.



Network management is the collective activity undertaken by all relevant operational stakeholders and Member States to synchronise capacity and demand in the network. It is based on reliable traffic flow analyses to support the operations of the service providers. It also covers harmonising the traffic flow of neighbouring regions that would support seamless operations via identifying operational constraints and bottlenecks establishing interfaces where the integration of traffic data (e.g. flight plans) is achieved. And it strives to optimise gate-to-gate flight trajectories and flight profiles in order to reduce emissions and air pollutants.

CANSO supports a stronger network-oriented approach towards the management of air traffic across Europe. This implies a coordinating and supporting role of a neutral and impartial Network Manager, not only in daily operations but also in longer-term strategic planning, which is duly reflected in its governance structure and in any network decision-making process. It also implies the delivery of agreed capacity by ANSPs that matches the demand of the airspace users, while taking into account potential constraints beyond ANSPs' control (demand and capacity balancing).

Effective collaborative decision-making processes are used to construct overarching network-oriented strategies for managing traffic flows in Europe and for developing measures. Constraints of all stakeholders as well as operational, technical and financial effects on these stakeholders are taken into account when developing these strategies and measures.

The ANSPs, appointed to exercise control within particular volumes of airspace, are accountable for determining how to implement these network-oriented strategies in a safe and efficient manner. All operational stakeholders are responsible for upholding and executing the agreed-upon strategies, plans, and measures.



7. Research & Innovation, Industrialisation and Deployment driven by operational stakeholders enables the implementation of the Digital European Sky.



CANSO finds it essential for a SESAR-like arrangement to be implemented in the post-2027 timeframe to enable the full implementation of the European ATM Master Plan and hence the delivery of the Digital European Sky.

A Public-Private Partnership, enabling co-creation, management, and governance by all impacted stakeholders, manages under a single entity research and innovation, industrialisation, and deployment activities at the European level. This collaborative structure directly addresses the need to accelerate the modernisation of ATM systems, infrastructure, services, and operations, ensuring Europe's aviation system can safely and efficiently accommodate future growth and the increasing diversity of air traffic. Moreover, it supports the strategic goal of enhancing European competitiveness on the global stage and advancing technological sovereignty.

In this context, European funding for innovation in the ATM ecosystem serves as a catalyst for private investments and remains vital for fostering collaboration in research, while driving coordinated, synchronised, and harmonised implementation among all operational stakeholders.

8. Service-oriented architecture enables a more agile and faster adoption of new technology.



A technological evolution towards the Digital European Sky is essential for enabling future capacity demand and new operational concepts such as Trajectory Based Operations. This point addresses the journey towards a modern, data-driven and cloud-based service-oriented architecture delivery model. This new model allows for a faster development and deployment of the new solutions and improvements envisaged by the European ATM Master Plan, while ensuring interoperability in operations, airspace and technology across ANSPs. It also supports dual-use solutions in a collaborative approach.

A crucial element in the transition to the New Service Delivery Model (NSDM) is the availability of a secure and resilient European ATM infrastructure network that also respects local security, sovereignty and military considerations and regulations. This points to the need for standardised interfaces in key ATM systems.

Digitalisation and virtualisation allow services to be offered in a modular way, enabling a more efficient use of ATM infrastructure. It also enables greater operational flexibility while retaining the ANSP's ability to face and manage contingency and military situations. Given the volatile geopolitical environment, core communication, navigation and surveillance (CNS) infrastructure must be maintained in order to sustain the capability for minimum service provision based on national and military requirements.

This point does however not rule out the possibility that an ANSP may still be an asset-owning provider of services for its own use or for services to be offered to other ANSPs.

This evolution is expected to follow a medium- to long-term deployment timeline. It will require a significant financing effort from the ANSPs together with the appropriate incentives/EU funding, and its success will strongly depend on addressing all regulatory, standardisation and certification gaps and on the commitment of all involved stakeholders, including ATM system suppliers.

9. Modernised training and licensing reflect the evolving role of the human.



Modernised training and licensing must cater for the changing role of the human in the ATM system and ensure that ANSPs remain attractive for skilled personnel and enable attracting young aviation professionals.

Increased automation and the use of artificial intelligence and machine learning in ATM training unlocks ATM capacity and improves ATM performance. The evolution towards an environment where technology and AI support human-decision making by predicting air traffic with greater accuracy and detecting potential conflicts faster requires a changing role of both operational and technical staff. To enable a smooth evolution and a successful roll-out, it is essential to build trust in automated and AI systems by involving staff early in the design and development of the new systems and to properly train them to get adapted to the new technologies.

Regulation for training and licensing needs to be harmonised and adjusted (competency-based licensing). For the specific role of Air Traffic Controllers, this modernisation is envisaged to result in a reduction in the time needed for training to become a licensed controller.

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CANSO Europe is the voice of the air traffic management (ATM) industry in the region, working alongside aviation industry partners and European institutions to represent the interests of air navigation service providers (ANSPs) and influence the development and implementation of European ATM legislation.

Europe is one of the most complex air traffic management regions, with CANSO Europe's 36 Members representing a variety of airspace, service provision and business models. CANSO's priority is to define long-term solutions to efficiently and effectively tackle challenges in Europe, including capacity demand, climate change, emerging airspace users and evolving risks such as geopolitical tensions and cyber-security, while maintaining safety, the industry's number one priority.

To do this, CANSO is committed to playing a proactive role in shaping the future of ATM and championing ANSPs as reliable and predictable aviation industry partners.