

CANSO – SHAPING EUROPE'S FUTURE SKIES

SHAPING
OUR
FUTURE
SKIES

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Introduction – ATM

ANSPs are partners for a safe, resilient, cost-efficient and sustainable European air Transport.

They are responsible for providing and operating an important part of the critical infrastructure of the EU and its Member States.

They play an essential role in the aviation value chain by contributing to the efficient operation of air transport, and consequently to social and business connectivity and to economic growth.

CANSO's members are committed to maintaining the already very high level of safety.

They are also committed to:



The transformation to new digital technologies to enable further improvement of flight efficiency



Implementation of new measures and procedures to allow airspace users to plan more efficient flight trajectories



A network-centric approach to facilitate a pan-European approach to air traffic management

These changes will benefit airspace users, passengers and the environment.

ANSPs also have a fundamental role to play in the safe and fair integration of drones and other new airspace users into European airspace (U-Space)

Our members are therefore **shaping Europe's future skies**.



CANSO has
34
European members



CANSO Europe's members handled
10.8m
flights in 2019
(the last year before the COVID pandemic)

Introduction – ATM (continued)

During the crisis – our members continued to provide a full service

ANSPs and the whole ATM network continue to play their essential role in times of crisis. When the rest of the world stopped during the COVID pandemic, ANSPs kept the skies open to allow essential flights carrying medical equipment, doctors, and in the later stages of the pandemic, vaccines.

Environment

Sustainability is one of the biggest challenges the aviation industry faces. ANSPs fully intend to play their part in the decarbonisation of aviation and the climate targets of the EU Green Deal. Through an initiative called Destination 2050, we are committed to a joint roadmap for the whole European aviation sector to reach net zero carbon emissions by 2050. ANSPs will achieve this through offering more environmentally efficient routes that are currently not possible. This will involve cooperation between stakeholders to apply new ATM measures and through digitalisation of the whole ATM system.

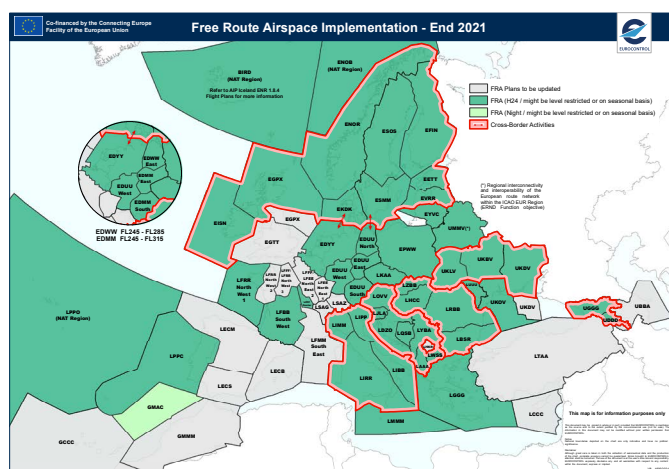
Click on the green countries below to see our European members.



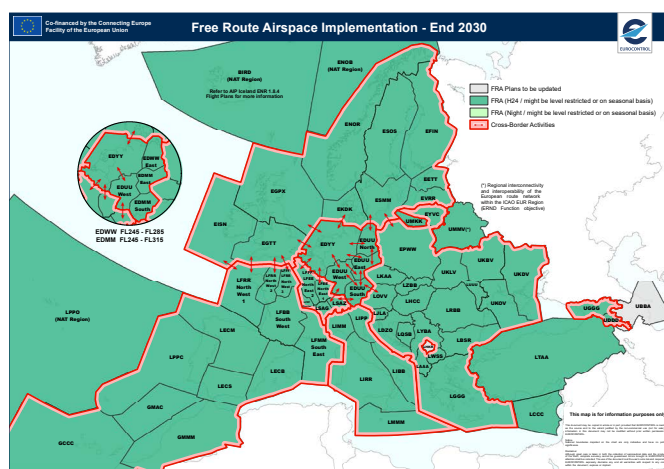
New ATM Measures

Free Route Airspace (FRA)

ANSPs have been drivers of successful network management. They have successfully implemented FRA projects across Europe, which **allow airline crews more freedom to select more fuel-efficient trajectories**. Implementation of FRA is already advanced in many areas of European airspace, and the next phase will be to apply this across borders. FRA has the potential to make the biggest contribution toward improving environmental efficiency ANSPs can provide. This demonstrates that with their innovation, state sovereignty and the fragmentation of European airspace do not have to be a barrier to progress, cooperation and efficiency.



Free Route Airspace Implementation – End 2021
Source: EUROCONTROL



Free Route Airspace Implementation – End 2030
Source: EUROCONTROL

Continuous Climb Operations / Continuous Descent Operations (CCO / CDO)

CANSO and its members have worked through EUROCONTROL to facilitate CCOs and CDOs, which **allow aircraft to follow a flexible, optimum flight path on take-off and landing**. These procedures deliver major environmental and economic benefits through reduced fuel burn, emissions, noise and fuel costs.



New ATM Measures (continued)

Flexible Use of Airspace (FUA)

Under FUA, airspace which is normally designated for military use can be **allocated for civilian use at short notice** based on current operational requirements. This allows shorter and/or wind optimal routes, saving fuel burn.



Digital transformation

Dealing with future increases in air traffic and the diversity of airspace users will require **digitalisation and automation**. Through digital transformation, CANSO and its members are contributing to the development of a modern EU ATM system as role model in ATM evolution for rest of the world.



New ATM Measures (continued)

SESAR projects

All ANSP modernisation projects are based on the ATM Master Plan of the Single European Sky ATM Research Joint Undertaking (**SESAR JU**) and the related Deployment Programme from the **SESAR Deployment Manager**. These programmes, co-funded by the EU, run until 2035. This guarantees that all changes will contribute to the common goals. CANSO Europe's members are essential participants in SESAR.

The **SESAR innovation pipeline in 2020** included projects in the areas of High-performing airport operations, Optimised network operations, Advanced air traffic services, Enabling infrastructure and U-Space.

In December 2021, the SESAR Deployment Manager reported that:



200

out of its **343** planned projects were already in operation and bringing benefits to passengers



In 2021,

80%

of European flights were equipped with Data Link Services (allowing digital exchange of information between aircraft and ground) up from **40%** in 2018



In 2021,

88%

of flights applied Automatic Dependent Surveillance – Broadcast (ADS-B), allowing real-time tracking, up from 25% in 2018

By 2030, these will save:



29.2m

minutes of passenger time



1.7m

tons of CO₂

These figures do not include other local-specific solutions or multi-stakeholder deployment projects falling outside the SESAR programme.

Social Dialogue

ANSPs take their responsibilities seriously with respect to the human factor in developing, training for and implementing new technologies.

Areas of focus include the mobility of Air Traffic Controllers, fatigue, digitalisation and automation etc.

They therefore intend to work with their staff representative organisations to realise this digital transformation. CANSO will provide guidance for this through social dialogue with professional staff organisations at European level.

CANSO members' investment projects

CANSO's European members are investing for the future through many projects which will facilitate the transition to a digitalisation and automisation in ATM. These are some recent examples.

Poland: PANSA upgrades data exchange between systems



PANSA has developed a software tool known as **System CAT** (Common Airspace Tool) to support exchange of data between systems used by different air traffic services. The latest version includes radar visualisation data, which provides data regarding aircraft operating in a specific area. This enables operators to verify traffic and aircraft in particular areas. It is significant feature in Advanced Flexible Use of Airspace concept, under which a given airspace can be switched from military to civilian use at short notice.

Hungary: Budapest to manage landings and take offs remotely



HungaroControl has signed a contract to make Budapest Airport the first European capital airport to have its air traffic controlled from a **high-tech facility outside of the airport premises**. While air traffic controllers normally need to monitor several different screens, the new system will integrate all relevant functions and information into a single display. This will improve the controllers' situational awareness, their efficiency and ultimately the flight safety. HungaroControl will also integrate additional flight lists into the tower display, further contributing to a seamless digital working platform for the controllers.

CANSO members' investment projects (continued)

Netherlands: LVNL switches entirely to satellite navigation



LVNL has switched entirely to **innovative satellite navigation**. This means that aircraft no longer navigate from and to take-off and landing runways using physical beacons on the ground, but a signal from satellites instead. This makes it possible to design more efficient flight paths to enable aircraft to fly more precisely to airports in the Netherlands, where possible avoiding residential areas. This is a major step forwards by LVNL in terms of modernising Dutch airspace.

Investments – Policy asks

The ATM infrastructure requires modernisation and so there is a need to ensure continuity of investments to meet the short-term costs required to deliver projects as well as delivering longer-term benefits.

This investment should be built into the EU's Performance & Charging Scheme for ATM, so that there is no contradiction between the targets ANSPs must meet for Cost Efficiency – which puts pressure on ANSPs to make financial savings – and those for Capacity provision – which require financial investment.

CANSO members' investment projects (continued)

U-space / drones

ANSPs are best placed to provide a number of core services critical to the safe, secure and efficient handling of unmanned aircraft traffic (drones) into airspace, a concept known as U-space or unmanned aircraft system traffic management (UTM), while ensuring safe integration with ATM. ANSPs already have the appropriate safety, airspace and air traffic management culture, expertise and skills as well as the means to implement key U-space services. Many ANSPs are proving this already through the delivery of UTM related projects, often in partnership with new drone technology companies.

Case study: Port of Hamburg sandbox project (2021)



The overarching goal of this three-month project was the practical demonstration of the U-space ecosystem in the Port of Hamburg to implement the EU's new U-Space Regulation, which must be implemented by 2023. Project partners DFS (the German ANSP) and its subsidiary Droniq set up a U-Space real-world laboratory and developed the necessary legal, technical and procedural realization of the concept. Based on this, the flight operations of different Unmanned Aircraft Systems (UAS) operators were safely managed and fairly integrated into the airspace of a controlled traffic region using the UTM system developed by DFS.

