

CONTRIBUTING STAKEHOLDERS

EUROCONTROL

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The EUROCONTROL UAS Vision

How long until we fly on a Brussels - New York flight without a pilot? It is EUROCONTROL's belief that the current Unmanned Aircraft Systems (UAS) platforms are setting the technological standard for such a future application.

EUROCONTROL's main goal is to harmonise and integrate Air Navigation Services in Europe, aiming at the creation of a uniform Air Traffic Management System for civil and military users and achieve the safe and expeditious flow of traffic, while minimising adverse environmental impact.

Recognizing that more airspace segregation is not a way forward, EUROCONTROL has a vision for integrating the UAS into the already-crowded European airspace.

The EUROCONTROL ATM UAS vision is based upon a number of principles: UAS are an integral element of the ATM network; EUROCONTROL sees itself, together with the UAS community, involved in UAS integration in the long-term; ATM integration will take place in validated, safe first steps; the goal is full UAS type certification; UAS is integral to the SESAR ATM Target Concept. Last but not least, the UAS technological developments are an opportunity to improve safety for all.

To achieve this goal, EUROCONTROL's UAS vision is to find synergies between the UAS community at-large and EUROCONTROL's four-pillar structure: Regional ATC Services; Pan-European Functions; Support to Regulation; ATM Network Design. To this end, UAS's are considered as legitimate airspace users, and from a civil perspective their operations must be transparent.

ATM safety is EUROCONTROL's top priority, and although EUROCONTROL is pushing for the UAS to operate outside segregated airspace, the UAS operations should take place at an equivalent level of ATM safety to manned aircraft operations. In the same spirit, we should not forget that UAS are transformational, and they must not increase risk to other airspace users and must not deny airspace to them.

EUROCONTROL is leading work on the ATM aspects of UAS flight in European airspace and has already published specifications for military UAS flying outside segregated airspace. The principles are firstly, UAS operations should not increase the risk to other airspace users; secondly, ATM procedures should mirror (to the extent they can) those applicable to manned aircraft; and thirdly, the provision of air traffic services to UAS should be transparent to air traffic controllers. These principles appear to be gaining universal acceptance as the basis for all UAS operations in non-segregated airspace.

Up to now, the EUROCONTROL UAS involvement was in areas such as civil military coordination, the JAA-EUROCONTROL UAV Task Force, the EUROCONTROL UAV-OAT Task Force, and cooperated with various bodies concerned with UAS integration including EUROCAE (European Organisation for Civil Aviation Equipment) Working Group (WG-73); the FAA;

NATO FINAS (Flight in Non-Segregated Airspace) Working Group; EASA; the EDA; ICAO; JARUS, UVS International; and the UAS industry.

The first real-time ATC/UAS simulation took place in September, 2008, and identified important initial ATM requirements and certification considerations.

The future steps of EUROCONTROL's UAS involvement are to establish the EUROCONTROL UAS ATM Integration Activity, optimise the involvement of EUROCONTROL, involve all relevant Agency areas of expertise, provide a perspective of the pan-European ATM network, create synergies with States and relevant international organisations, maintain/improve ATM performance (safety, efficiency), seek short-term UAS integration wherever possible, derive ATM improvements from UAS technologies, and facilitate global interoperability.

The EUROCONTROL argument for UAS's in SESAR promotes UAS technologies/design concepts for all aircraft. Also, UAS communications architectures are SWIM friendly, and SESAR 4-D trajectories are compatible with UAS. Moreover, UAS's are environment friendly, have higher operational service ceilings ensuring airspace flexibility and increased capacity, and provide diverse societal benefits.

EUROCONTROL is committed to ensure that a safe, smooth and progressive integration of UAS operations can be effected in close and continued cooperation with all UAS stakeholders involved.

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