System Wide Information Management (SWIM) Information Bulletin

UK Agreed SWIM Definition

System Wide Information Management (SWIM) is the ***Standards, Infrastructure and Governance*** *for Air Traffic Management (ATM) related information, which will enable the standardised, secure and* ***digital exchange*** *of* ***information as a services*** *across all aviation domains. The effective implementation of SWIM is the* ***foundation of the UK's transition to data driven, interoperable ATM operations.***

The Need for Digital and Data-Driven Transformation

The implementation of System Wide Information Management (SWIM) is at the foundation of the transition to a fully digital, information-centric airspace environment. SWIM provides a service-oriented framework for appropriate access to high-quality, standardised data, unlocking innovation, supporting value-added services and fostering market competition. It also enables advanced technologies, such as digital twins and AI-driven decision-making, and enhances regulatory oversight through greater transparency and interoperability. Without the implementation of SWIM, the UK will not be able to support a scalable, dynamic and future-ready ATM ecosystem.

Why Does SWIM Matter in the UK?

Data-Driven Approach to the Future of ATM

To deliver the ambitions of the CAA's Airspace Modernisation Strategy (AMS)[1] and Future of Flight (FoF), there needs to be a transition from legacy, fragmented information exchange, to a modern data-driven approach to ATM, which unlocks innovation and value-added services.

BVLOS Integration Requires Digital Infrastructure

Safe and scalable Beyond Visual Line of Sight (BVLOS)[2] integration in complex or mixed airspace requires digital ATM/ Unmanned Aircraft System Traffic Management (UTM) infrastructure to ensure real-time coordination, situational awareness and dynamic deconfliction.

ICAO Compliance and Regulatory Alignment

To comply with the Global Air Navigation Plan (GANP) and Procedures for Air Navigation Services - Information Management (PANS-IM). This will enable seamless international interoperability, cross-border operations and secure our role in the global aviation ecosystem.

What Are the Benefits of SWIM for the UK?

A

Innovation & Competition

SWIM creates a flexible, standards-based digital data-exchange framework that enables aviation technologies to innovate, interoperate and deliver consistent, high-quality information that supports new value-added services across the ecosystem.

B

Enabling Integrated Airspace

By using common standards and information services, SWIM allows all airspace users to access the same operational information, supporting safe, data-driven management of a shared and integrated airspace environment.

C

Unlocking Automation

SWIM enables automation by allowing systems to exchange standardised data seamlessly, facilitating concepts such as automated re-route recalculation without manual intervention.

D

Global Interoperability

SWIM supports cross-border collaboration by enabling international aviation stakeholders to share information using common standards, strengthening a future-ready, harmonised global airspace system.

E

Improved Situational Awareness

SWIM enhances decision-making by enabling real-time sharing of accurate, standardised aeronautical data across all stakeholders, improving awareness, safety and operational efficiency.

1. Airspace Modernisation Strategy | UK Civil Aviation Authority
2. Future of Flight BVLOS Roadmap | UK Civil Aviation Authority

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UK Civil Aviation Authority

Progress So Far

Since launching a dedicated SWIM project at the CAA in April 2025, we have achieved the following milestones:

- **UK SWIM Concept Manual Published Following ICAO Manual**
- **SWIM Delivery Model Established**
- **Eurocontrol Selected as the UK SWIM Registry**
- **Draft SWIM Implementation Framework**
- **Draft Uncrewed SWIM Technical Architecture**
- **Draft Uncrewed SWIM Example Operational Scenarios**

CAA SWIM Roadmap

2026

- **V1 SWIM New Users and Integrated BVLOS Technical Architecture & Use Cases**
  Lays out proposed SWIM architecture for new entrants into the UK airspace
- **V1 SWIM Implementation Framework Published**
  Lays out the phased implementation of SWIM for new users in the UK airspace

2027

- **Enabling Low Level Urban (LL1) & Fully Integrated (FI1)**
  Future of Flight scenarios unlocked and enabled
- **V1 SWIM for Crewed Aviation Technical Architecture & Use Cases**
  Lays out proposed SWIM architecture for existing, crewed UK airspace users
- **V2 SWIM New Users and Integrated BVLOS Technical Architecture & Use Cases**
  An updated version for SWIM architecture, following further technical work

2028

- **V2 SWIM Implementation Framework Published**
  An updated version following further developments to the technical architecture
- **SWIM Policy for Crewed Users**
  Proposals to update Acceptable Means of Compliance (AMC) / Guidance Material (GM) for information management related to Crewed Users
- **SWIM Policy for New Entrants**
  Proposals to update AMC/GM on information management related to New Entrants
- **Enabling Low Level Urban (LL2) & Fully Integrated (FI2)**
  Future of Flight scenarios unlocked and enabled
- **Framework for Air/Ground SWIM for Non-Safety Critical Information**
  Technical and regulatory enablers for industry to deliver this milestone

2029

- **SWIM Policy for Crewed Users Updated**
  AMC/GM for Crewed Users reviewed and iterated following industry response to using the SWIM framework

⋮

2033

- **Framework for Air/Ground SWIM for Safety Critical Information**
  Technical and regulatory enablers for industry to deliver this milestone

2034

- **Flight and Flow Information for a Collaborative Environment (FF-ICE) Enabled**
  Collaborative, standardised and real-time data exchange facilitated, as per ICAO vision in their SWIM Manual

Steps to Implement an Effective Regulatory Framework for SWIM

SWIM Rulemaking
Rulemaking activities to outline the regulatory changes needed to enable SWIM

Public Consultation
Industry consulted on proposed regulatory changes to inform SWIM policies

Opinion and Instructions Document (OID) drafting and approval, recommending changes to UK legislation to the Department for Transport

SWIM, MET, & AIM Statutory Instrument (SI) Laid
SI laid to implement rulemaking into binding legislation

Key:

- Policy Documents
- BVLOS Roadmap Scenario Milestones

How to Engage with us Moving Forward

As part of our SWIM technical development, policymaking and rulemaking activities, we will be looking for active stakeholder engagement with the Implementation Framework and ConOps for both Uncrewed and Crewed SWIM. This will be done through our mailing list, SkyWise, LinkedIn and the CAA website. Follow us on these channels, so that you stay up-to-date and receive notices of our SWIM consultations and any important SWIM decisions. Our aim is to work closely with industry to ensure the implementation of SWIM in the UK is effective to meet Future of Flight ambitions and to support wider government objectives.