



*i*Conspicuity for SAR (EPAS RES.0032)

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ICAO EUR SAR TF Meeting & Workshop

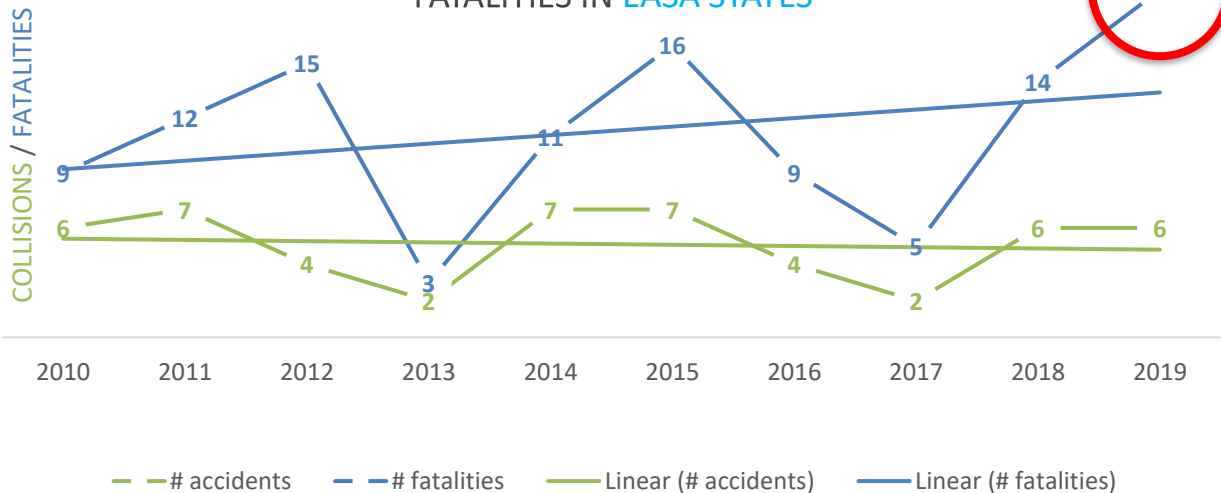
21 November 2025

How it started ...



Safety data 2009 - 2019

FATAL AIRBORNE COLLISIONS / AIRBORNE COLLISION FATALITIES IN EASA STATES



60 FATAL COLLISIONS
~
6 PER YEAR

137 FATALITIES
~
13 PER YEAR

ALL UNCONTROLLED TRAFFIC

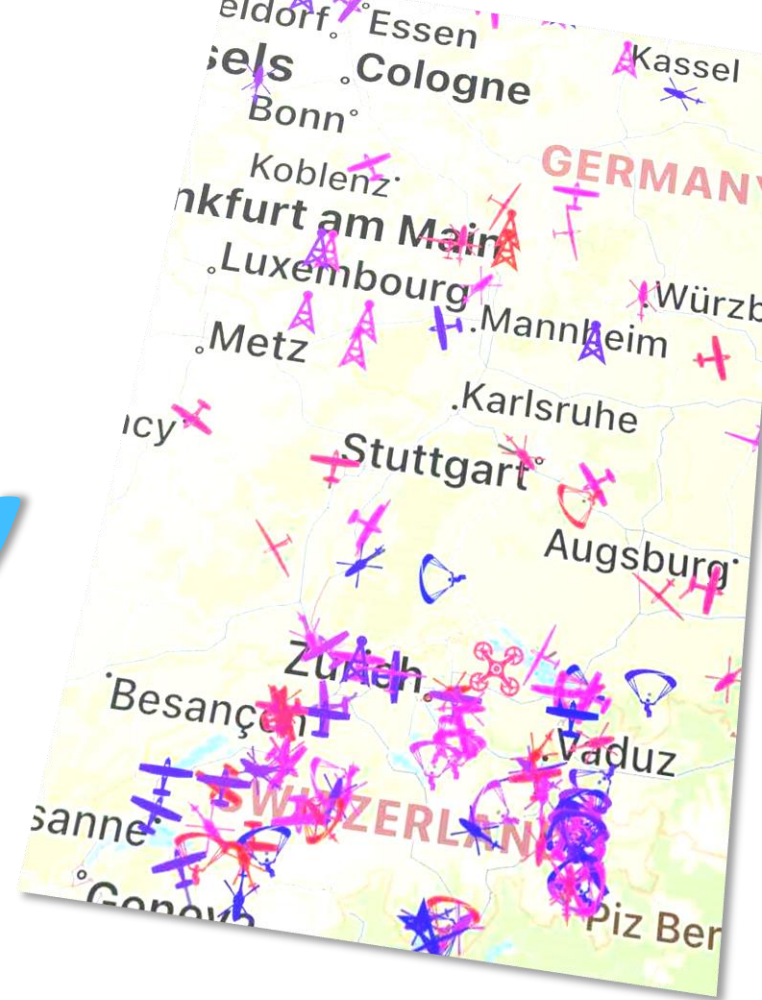
ALL SMALL AIRCRAFT

U-space compatible ✓

Conspicuity

Connected aircraft ...

... for better situational awareness



EPAS Actions – *i*Conspicuity

Type	Title	2021	2022	2023	2024	2025
RES 0031	Solutions for Interoperability			Light Green	Dark Green	
RES 0032	Support Flight Information Service				Light Green	Dark Green
SPT 0119	Promote Compatibility Installations	Orange	Orange	Orange	Orange	Orange
RMT *	Use	Purple	Purple	Purple	Purple	Purple
SPT 0120	Promote Innovative Airspace Design	Orange	Orange	Orange	Orange	Orange
MST 0038	Improve Airspace Design		Light Blue	Dark Blue	Dark Blue	Light Blue

*i*Conspicuity

Airspace

SERA.6005 (c)

*Manned aircraft operating in airspace designated by the competent authority as a **U-space airspace**, and not provided with an air traffic control service by the ANSP, shall continuously make themselves **electronically conspicuous to the U-space service providers***

One Language ✓

(light)

ADS-L

*Affordable
Interoperable
GNSS based
Privacy & Security*



To be seen in U-space - SERA.6005(c)

ADS-B Out (1090 MHz)



For certified aircraft, using the **existing certified technology** already installed on board



ADS-L 4 SRD-860



Non-certified devices transmitting at low power on the licence-free band SRD-860, in compliance with ADS-L specifications



ADS-L 4 MOBILE (telephony)



Mobile telephony application transmitting in compliance with ADS-L specifications

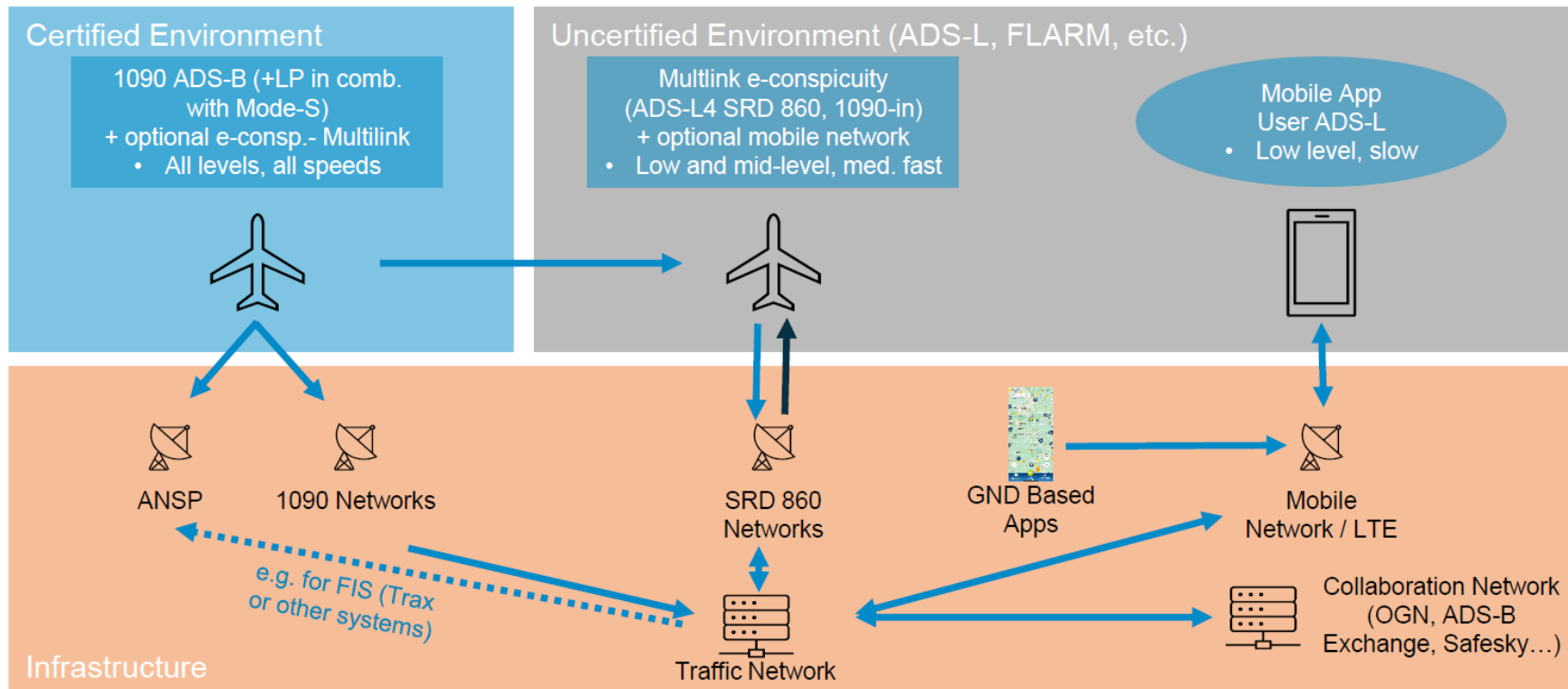


2022



2025
(draft)

Future *iConspicuity* according to RES.0031*



iConspicuity



JOINT HIGH-LEVEL ROADMAP



Use Cases

Reduce collisions

and other airborne hazards by **enhancing situational awareness** of their surroundings



Access U-space

through **affordable and interoperable electronic conspicuity** for manned aircraft operating without ATC services



Additional benefits*

Complement FIS and SAR without requiring changes to existing ATM/ANS principles and/or operational practices



Target Solution



Simple

System design that ensures interoperability and affordability for end users



One Language

To ensure interoperability. ADS-B and ADS-L are good candidates for common language(s)



One Link

Air-Ground transmission for U-space
A direct radio Air-Air link for pilot awareness
A second link for other purposes

Candidate Technologies



1090 MHz

Worldwide used protected spectrum requiring certification and licensing



978 MHz

Regionally deployed protected spectrum requiring certification and licensing. **Needs evaluation and planning in Europe**



SRD 860

Unprotected and unlicensed but **regulated and standardised** spectrum **currently available in all Europe** until ~2030



Mobile Telephony

Possible complementary link in altitudes where network is available, but not supporting direct air-to-air and **requiring network**

Approach



Consider

Key criteria

U-space **mandate**

Voluntary elsewhere

Different needs (IFR vs glider)

Dual use cases (e.g. ADS-B for ATC and U-space)



Communicate

Throughout the process

A **clear strategy and communication** campaign to get stakeholders to implement the right solutions

Address

Use Cases

Pilots' **situational awareness**, Europe-wide at all altitudes

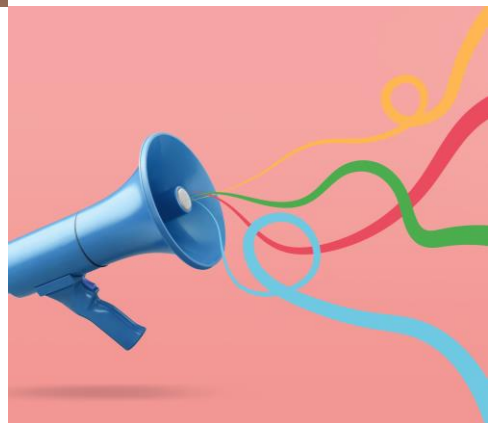
U-space conspicuity, initially geographically limited & low altitude



Assess

Candidate technologies

'One link' based on a **comparison of options** considering **assessment of ground-based operations** and the **business case for all users** (airborne and on the ground)



Timeline & Implementation Milestones





Before 2020

Non-interoperable or private solutions available for GA, no solutions for drones, *iConspicuity* concept developed by EASA

2020-2023

EASA teamed up with industry in development of ADS-L as a solution for GA in U-space airspace

2024-2027

Interoperable (ADS-L) protocol developed tested for air-to-air, U-space and selected ATM use cases. Required spectrum needs finalised.

2028 onwards

Any pilot or operator can choose an interoperable and affordable solution to benefit from enhanced situational awareness in any airspace.

2025 Top Priorities





Maintain a safe, resilient aviation ecosystem

Ensure that European safety and oversight standards effectively mitigate all risks affecting safety.

Approve safe products that perform as expected in the system as part of a competitive industry.

Promote a human-centered approach to maintaining safety.



Safety Risk Management

Efficient SRM process that develops mitigations for the top safety issues through EPAS (focus on safety).



Risk Based Oversight

DOA mechanism designed & endorsed. Principles for other organisations harmonised. Maturity model for NCAs.



ATM & Aerodromes

Certification and oversight of ATM DPO, ATM/ADR ground equipment.



Implement SMS & ISMS across Industry

Full integration into organisation oversight & standardisation.
Competence building for NCA/EASA.



Flightpath 2030+

Deliver Programme Objectives related to e-conspicuity and prevention of mid-air collision.

iConspicuity Declaration

Introduction

This iConspicuity¹ Declaration is a voluntary policy statement, jointly established by participating aviation authorities and other entities², specifically addressed to the **General Aviation (GA)** sector. Its primary objective is to facilitate and encourage the use of iConspicuity devices and data (including ADS-B out³, ADS-L⁴, surveillance data, and similar information) by all stakeholders with the shared aim of improving operational safety and enhancing safety culture in GA⁵.

The adoption of this iConspicuity Declaration does not affect the application of Regulation (EU) No 376/2014 regarding the reporting, analysis and follow-up of occurrences in civil aviation and any other applicable European Union or national legislation⁶.

Commitment

By adopting this iConspicuity Declaration we, the signatories, express our commitment to foster the development of iConspicuity devices and their use and utilisation of related data with the intention of improving aviation safety, fostering innovation and enhancing operational efficiency through collaborative analysis. We pledge to adhere to the following:

Key Principles:

- Promoting Safety Culture:** The initiative aims to facilitate and promote safety culture in GA in order to foster positive safety behaviours.
- Voluntary nature:** The initiative is a partnership that signatories join on a voluntary basis.
- System-wide insights:** Analysis of iConspicuity data will focus on system-wide insights (big data approach) rather than the actions of specific situations. This encourages broad participation and fosters a safe aviation environment.
- 360-Degree Collaboration:** All relevant stakeholders will be involved in the analysis of iConspicuity data, ensuring a holistic and trusted approach to safety and operational improvements⁷. The collaborative analysis will lead to **jointly agreed actions** that will benefit all participants.
- Transparent Monitoring:** The process for analyzing and acting upon iConspicuity data must be transparent, allowing all stakeholders to track progress and ensure alignment with safety improvement goals.
- Data protection:** The use of data and information derived from the initiative will comply with the EU's General Data Protection Regulation⁸ (GDPR), which governs how the personal data of individuals in the EU can be processed and transferred.

¹ iConspicuity webpage

² Associations representing airspace users and relevant industry

³ ADS-B stands for Automatic Dependent Surveillance-Broadcast. It's a technology that enables aircraft to broadcast their position, speed, and other data to other aircraft and ground stations, enhancing situational awareness and safety. ADS-B comes in two main types: ADS-B Out and ADS-B In.

⁴ ADS-L is a lighter version (subset) of the ADS-B message content, originally developed to make manned aircraft electronically conspicuous when operating in U-space airspace.

⁵ European Plan for Aviation Safety, Volume II, 2024 Edition, task MST.0027 - Promotion of safety culture in GA

⁶ Manned aircraft are not required to be electronically conspicuous, except when operating as uncontrolled traffic in U-space airspace

⁷ This can serve as preparation for future inclusion in the [Data4Safety](#) programme.

⁸ Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data.





SKYRECON



NEW

Authorities already supporting the Declaration



EASA



Czech Republic



France



Greece



Latvia



Lithuania



Netherlands



Republic of North Macedonia



Romania



Slovenia



Spain



Switzerland

Communication & Promotion

→ EASA

→ [FAQs Automatic Dependent Surveillance — Light \(ADS-L\)](#)

→ FOCA

→ [Technology recommendation](#)

The proposed open standards are ADS-B out on 1090 MHz and ADS-L in the SRD 860 MHz frequency band. While the former is almost exclusively used in certified installations, the latter can be used in installed or portable devices.

→ [FAQs by FOCA](#)

Work in Progress

ADS-L

4 SRD860

Issue 2*

Aviation

Traffic

Status

Uplink

NEW

Traffic

FIS-B

Drones

NEW

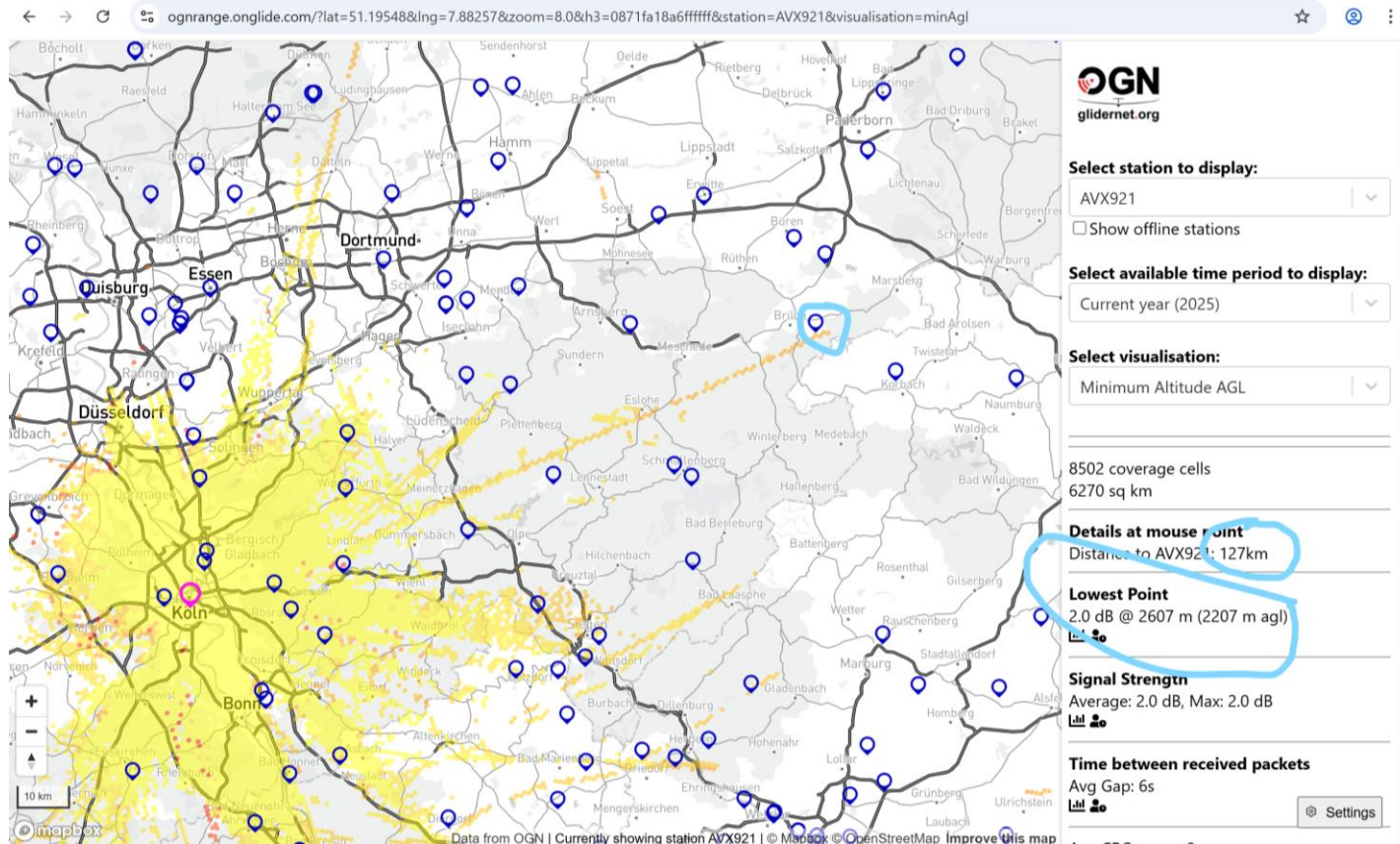
RemoteID

EASA Station

ADS-B, ADS-L, FLARM, PilotAware, OGN, Remote ID, Basic Mode Multilateration



EASA Station - Performance



Next in 2025-2026 – iConspicuity for FIS and SAR

RES.0032 **Use of iConspicuity devices/systems in flight information services**

EASA will investigate the use of iConspicuity devices/systems in air traffic management flight information services (ATM FIS), considering the ‘net safety benefit’ and the ‘operational safety assessment’ principles for the assessment of implementation issues and of possible benefits for Search and Rescue (SAR).

Status Not started

SIs SI-0043 Deconfliction of IFR and VFR traffic

SRs n/a

Reference(s) European Action Plan for Airspace Infringement Risk Reduction (EAPAIRR)
EASA BIS ‘Airborne Collision Risk’

Dependencies RES.0031

Affected stakeholders Pilots, Aircraft operators - all, NCAs, ANSPs, industry (e.g. avionics and ATM systems manufacturers)

Owner EASA ED.4 Air Traffic Department

PLANNING MILESTONES

Starting date	Interim report	Final report
2024-Q4	2025-Q1 → 2026-Q1	2025-Q2 → 2026-Q2

FIS enhancement

Improve the quality and safety of existing FIS by providing enhanced situational awareness for the FIS Officers or ATCOs (to similar level of information as is available to pilots) without the need to change existing rules, procedures or operational practices.

A few ANSPs are already engaged in this topic.

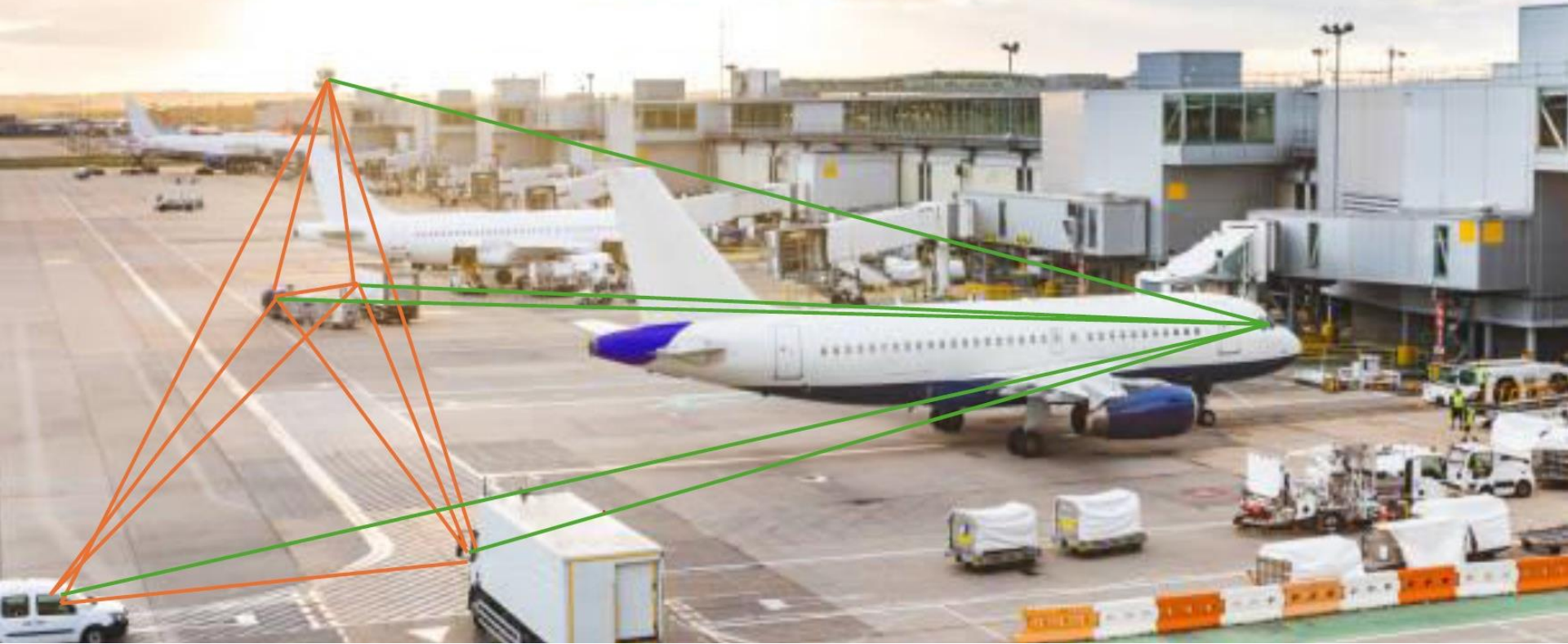


SAR enhancement

To help SAR teams distinguish between real and false alarms and minimize search times, e.g. through a single web portal that provides real-time and historical positions of aircraft and other aircraft such as gliders, paragliders and hang-gliders.

Pilot project in preparation (led by FOCA).

And what about Digital Towers or Airside / Runway Safety?



What is RES.0032 ?

- Desktop research
- Industry led (ANSPs, OEMs, associations)
- Explore how electronic conspicuity could help to enhance situational awareness in ATM
- Without changing existing rules or operational practices
- EASA role is to coordinate research activities and assist in drafting research objectives

Planned Activities

Timeline for RES.0032





SAR use case workshop

21 November 2025

Additional use case workshop #1 (tbc)

Q4 2025



Additional use case workshop #2 (tbc)

Q1 2026

Final dissemination event

Q2 2026



Expected Deliverables*

Use Cases

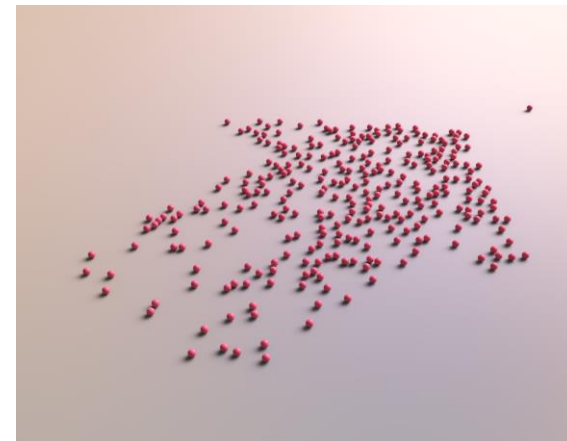
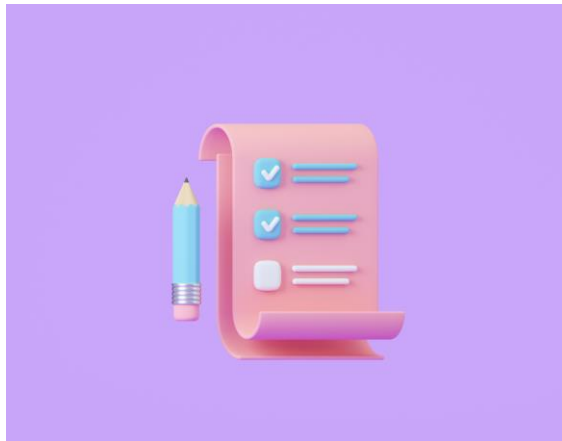
List and description of use cases where electronic conspicuity could help to improve situational awareness in ATM operations

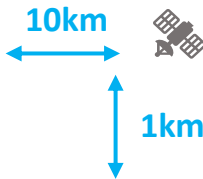
Information Items

List of mandatory and optional information to be transmitted from aircraft in relation to a specific ATM use case

Regulatory clarifications

List of areas for further development/clarification by regulators to support the use of electronic conspicuity in ATM





ADS-L for General Aviation and Drones



IFR

FL195 / 5.900m

VFR + IFR

