

Topics for Today

- The future of the GA Roadmap
- *iConspicuity* in U-space ... and beyond
- AVGAS update

EASA General Aviation

**"Are we winning the battle
against bureaucracy?"**

no!

GA is in our DNA

**Many EASA colleagues
started their aviation
journey in GA**

Those involved in the EASA GA Roadmap (and many other colleagues) are all involved in GA in one way or another. We live and breathe the challenges you face every day and are always looking on how we can make things better



John



Wendell



Alain



Vladimir

GA Roadmap 2.0

What we did already



A continuing priority for General Aviation



Net Safety benefit



Embracing new business models



Adapt design and production rules



GA goes digital



Share GA safety culture through promotion

GA Roadmap 2.0 Achievements

Part M Light



Basic IR



Balloon and Glider Rulebook



DTO



Part 21 Light



ADS-L



AWO / EGNOS



GA Safety Promotion



Sunny Swift

"AIRSPACE COMPLEXITY (II) EN-ROUTE"

AFTER A FEW DAYS OF CAREFULLY PLANNING THE BEST ROUTE AROUND RESTRICTED AND CONTROLLED AIRSPACE*, THE DAY OF THE FLIGHT HAS ARRIVED. PIERRE IS MAKING THE FINAL FLIGHT PREPARATIONS.

I HAVE CHECKED THE ROUTE, TAKING INTO ACCOUNT THE AIPs, LATEST NOTAMS AND AUP/UPS. MY FLIGHT CORRIDOR IS CLEAR OF RESTRICTED AND CONTROLLED AIRSPACE.

FOR THE BEST INFORMATION, ONCE IN-FLIGHT, THE FIS HAS THE MOST CURRENT AND CLEAR OVERVIEW OF THE AIRSPACE SITUATION. IT IS AT THEIR ROLE (T'S ATCS) TO GRANT YOU CLEARANCE TO CONTROLLED AIRSPACE, BUT THE FIS CAN GIVE YOU CRUCIAL INFORMATION, OR IN SOME COUNTRIES EVEN CALL THE ATC FOR YOU.

WITH HIS PLANNING READY AND CONFIRMED, PIERRE TAKES OFF WITH ÉPINAL AS HIS DESTINATION.

JUST BEFORE HE ENTERS FRANCE, HE CHANGES TO THE STRASBOURG FIS.

STRASBOURG INFORMATION, EU-EASA. GOOD DAY.
 EU-EASA, STRASBOURG INFORMATION HELLO.
 EU-EASA, TROUAM P2002, VFR FROM SAARBRÜCKEN TO ÉPINAL, MISSECOURT, 2 000 FT, QNH 1004, 1 NM NORTHWEST OF SIERRA, REQUEST TRAFFIC INFORMATION.

EU-EASA, QNH 1004, SQUAWK 4421, THERE ARE ISOLATED CUMULONIMBUS FORMING NEAR AND EAST OF LUNEVILLE.
 UMM, I PREFER TO DEVIATE WEST, CLEAR OF LUNEVILLE, THAT WOULD GET ME THROUGH THE LORRAINE CLASS D AIRSPACE.
 REQUEST TRANSFER TO LORRAINE CTR, AS I WILL NEED TO AVOID THE WEATHER.
 THE LORRAINE CTR FREQUENCY IS 122.075.
 THANK YOU STRASBOURG, LEAVING FREQUENCY EU-EASA.

PIERRE LEAVES THE STRASBOURG FREQUENCY AND CONTACTS THE LORRAINE CTR 10 MINUTES IN ADVANCE**. LORRAINE GRANTS CLEARANCE TO CROSS THEIR AIRSPACE.

THE REST OF THE FLIGHT IS ACCORDING TO PLAN. PIERRE IS REASONABLY PROUD OF HIS LANDING AT ÉPINAL.

DON'T HESITATE TO CONTACT THE FIS FOR INFORMATION AND ADVICE EN ROUTE. REMEMBER THAT HOWEVER IT IS THE ROLE OF THE ATC TO GRANT ACCESS TO CONTROLLED AIRSPACE.

* SEE PREVIOUS SUNNY #19, "AIRSPACE COMPLEXITY"
 ** SEE SUNNY ISSUE #6, "CLEARANCE TO ENTER CONTROLLED AIRSPACE"
 You can find links to -Airspace infringement references in the "related content" section
 Please send your comments and ideas to generalaviation@easa.europa.eu
 Join the GA Community!
www.easa.europa.eu/community/ga
 BY ELENA GARCIA & MONICA MESTRE @ EASA

#20 (2020)



Improving safety together with the skydiving community

European Union Aviation Safety Agency



General Aviation



Stream

About

Safety resources

Events

Topics

Members



Say something to the community

+ Add video

+ Add images

Post



Henry Pottkämper posted in General Aviation

5 days ago Public

LAPL/PPL Training Course (theoretical knowledge):

I often read on websites of flight schools that it is necessary to have 100 hours of instruction time for theoretical knowledge (of which at least 10 hours have to be in a physical classroom). Is there any legal source about these numbers or is this just the generell interpretation of the syllabus scope? I could not find these numbers in Part-FCL. Thanks for your help!

UPCOMING EVENTS
IN THE COMMUNITY

No upcoming events in this community

[All Upcoming events](#)

NEWEST TOPICS
IN THE COMMUNITY



SERA.14085 Use of blind transmission

Francisco Javier · 17 Jan



Flight Instructors Fatigue Reports

Maria Nilsen · 17 Jan

Turning the Vision into Reality



Then looking to the future.....

GA Flightpath 2030+



We will enhance safety culture, enable sustainable growth and embrace a digital future so that we maximize the benefits of technology and encourage wider diversity and accessibility

WHY?

Safety Challenges



Opportunities / Threats

Workforce

- Ageing population
- Lack of attractiveness for younger generations
- Competition Urban Air Mobility vs Commercial Air Transport

Innovation

- Integrated avionics, Artificial Intelligence, Machine Learning and increased automation
- Electric and hybrid propulsion
- Other disruptive technologies

Sustainable future

- Social acceptance of general aviation
- Climate impacts
- Infrastructure adaptation



WHAT?



**EUROPEAN PLAN FOR
AVIATION
SAFETY**
(EPAS) 2023-2025

European Union Aviation Safety Agency 29/11/2022

VOLUME I
Strategic priorities

GA in EPAS Volume II

Chapter	Domain
1	Systemic safety and resilience
2	Competence of personnel
3	Flight operations — aeroplanes
4	Rotorcraft
5	General Aviation
6	Design and production
7	Maintenance and continuing airworthiness management
8	Air traffic management/air navigation services
9	Aerodromes and ground handling
10	Unmanned aircraft systems and manned VTOL-capable aircraft
11	New technologies and concepts
12	Environmental protection

GA in EPAS Volume II - Actions for 2023+

Rulemaking

- **0230** - Introduction of a regulatory framework for the operation of drones
 - 0587 - Regular update of pilot training, testing, checking
 - **0678** - **Simpler, lighter and better FCL for GA**
 - 0687 - Regular update of CS-23
 - 0690 - Regular update of CS-STAN
 - **0727** - **Part-21 Light**
- Merged into RMT 0678

Research

- **0031** - Interoperability of different iC systems
- 0032 - Use of iConspicuity de information services

Safety Promotion

- 0083 - Flight Inst
- 0087 - V pilots
- **0119** - **Improvement flying for GA pilots**
- **0120** - **Promoting iConspicuity**
- 0120 - Promoting good practices in airspace design

Member States

- 0025 - Promotion of important safety issues for GA
- **0027** - **Improvement in the dissemination of safety messages**
- 0038 - Airspace complexity and traffic congestion

+ TACKLE CHALLENGES / THREATS

HOW?

GA Flightpath 2030+

Building on what was done already in the GA Roadmap to get more people engaged in fun and safe GA flying while embracing technology

Safety

Sustainability



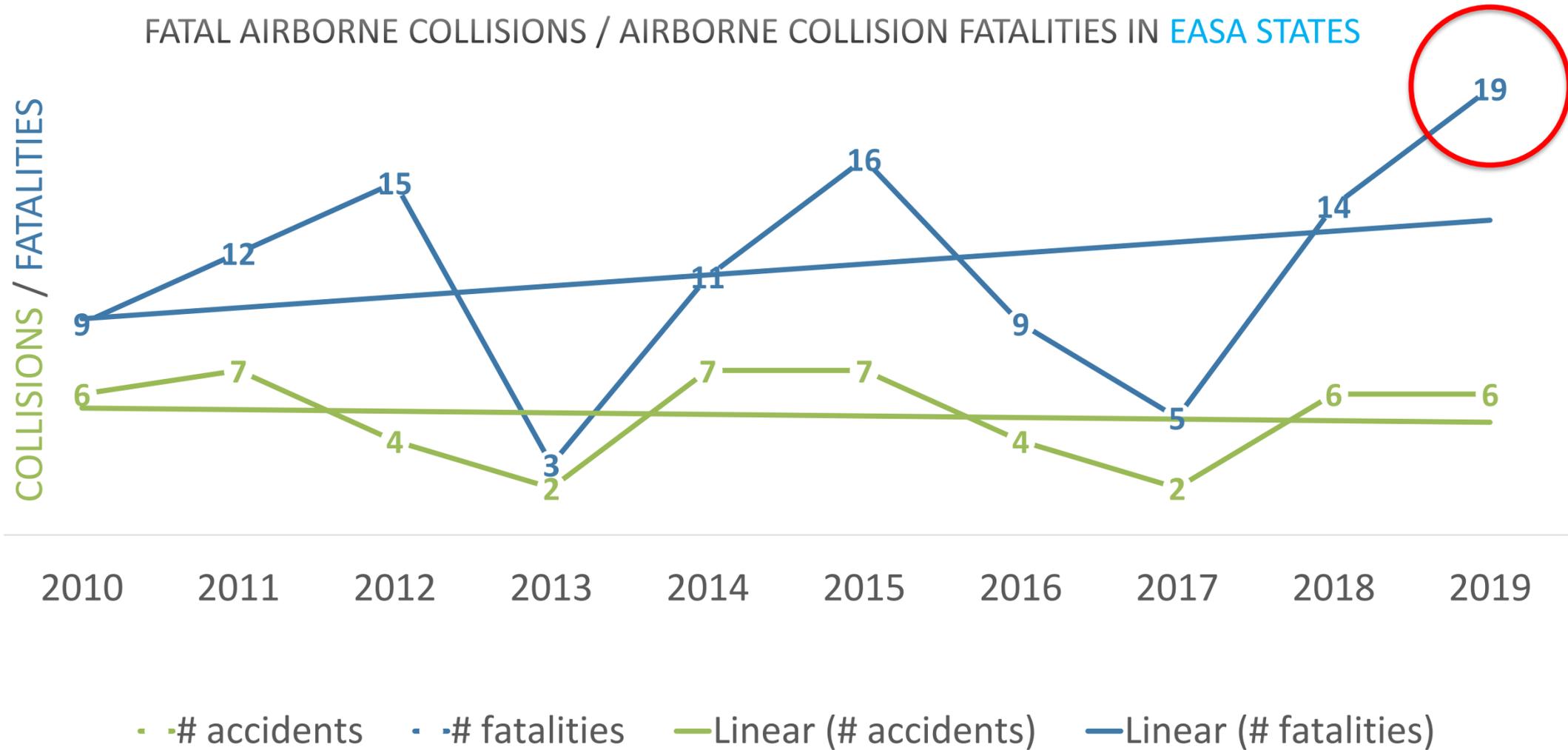
Digitalisation

Diversity

iConspicuity in U-space ... and beyond



Safety data 2009 - 2019



60 FATAL COLLISIONS
~
6 PER YEAR

137 FATALITIES
~
13 PER YEAR

ALL UNCONTROLLED TRAFFIC

ALL SMALL AIRCRAFT*

*MANY ROTORCRAFT

Problems and Solution Areas

Ineffective sharing
of traffic
information

Congestion of
uncontrolled traffic

iConspicuit

KEY
SOLUTION

Airspace

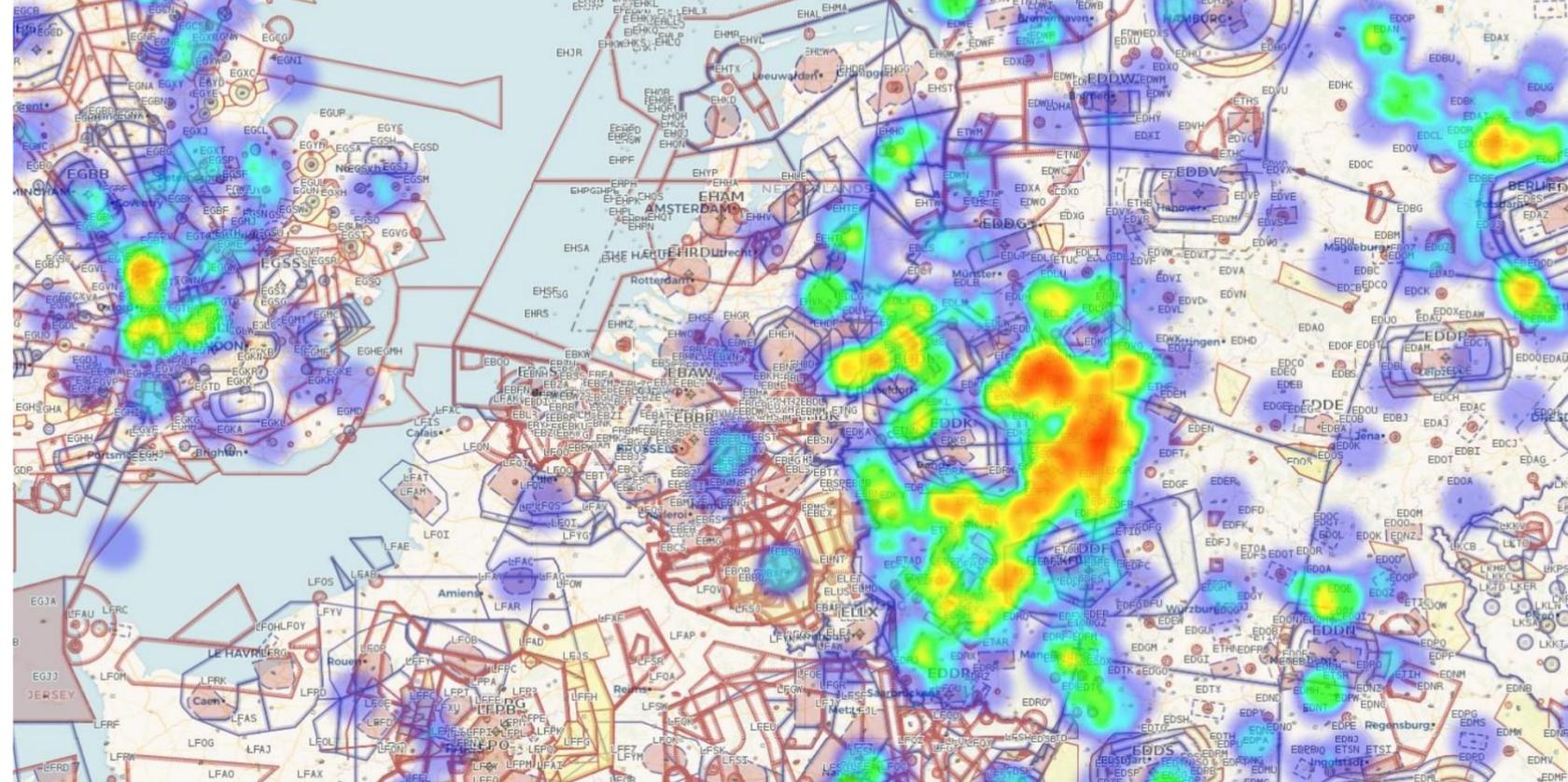
And
constant
interface with
U-space
developments

Drones operations

Airspace
inefficiencies

U-space

A set of *'new services'* and *'specific procedures'* designed to support safe, efficient and secure access to airspace for large numbers of drones *without airspace segregation* for the sole use of drones



iConspicuity

'in-flight capability' to transmit position and/or to receive, process and display information (other aircraft, airspace, weather, support to navigation ...) in a real time with the objective *to enhance pilots' situational awareness*

High Level Roadmap

iConspicuity for Rotorcraft and General Aviation

Step 1

Propose a solution for U-space airspace

MC/GM 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 ATIS, shall continuously make themselves **electronically conspicuous to the U-space service providers***

Step 2

Build on the U-space solution

Expand the functionalities and address the **GA and Rotorcraft conspicuity issue generally, including the possibility to use the information broadcasted for Flight Information Service**

Constraints & Boundaries

Development of AMC/GM to SERA.6005(c) by Q4 2021

Aircraft (manned)

- **Affordability** (to end users)
- **Technology available now** (aviation & other)
- **Single device policy**
- Simple installations
- Enable airborne collision risk mitigation for manned aircraft

USSP

- **Minimum necessary position** information (incl. from 3rd parties)
- **Affordable infrastructure** (ideally compatible with UAS needs)
- Minimum performance meeting U-space objectives

Resources

- Existing international standards (aviation & other)
- **Pan-European applicability**
- ITU regulated spectrum
- **Machine readable**
- **Open standards** (non-proprietary or free of royalties)

Contributors



Mobile Telephony Feasibility Study

Can existing
aircraft

Aerial Mobile Telephony is legal in Europe !

CEPT/ECC Decision (22)07 of 18 November 2022
on harmonised technical conditions for the usage of aerial UE for communications based on LTE and 5G NR in
the bands 703-733 MHz, 832-862 MHz, 880-915 MHz, 1710-1785 MHz, 1920-1980 MHz, 2500-2570 MHz and
2570-2620 MHz harmonised for MFCN

Standardization
(frequencies, services, roaming ...)

**Smartphones / Dedicated
devices**

Introducing ADS-L

- **Minimum standard** for making manned aircraft in U-space conspicuous to USSPs
- **Principle: “-L” is for “Light”**
 - Compatible with **low-cost devices** and **mobile telephones**
 - **GNSS-based** parameters
 - Derived from **ADS-B** and **simplified**
- Should support possible **future applications** (traffic awareness)

Means of Transmission

ADS-B Out (1090 MHz)



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

ADS-L (SRD-860)



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

ADS-L (Mobile telephony)



Mobile telephony application transmitting in compliance with ADS-L specifications



Summary – Step 1

Certified ADS-B out

- ✓ ICAO standard
- ✓ Already used
- ✓ All elements in place

SRD860

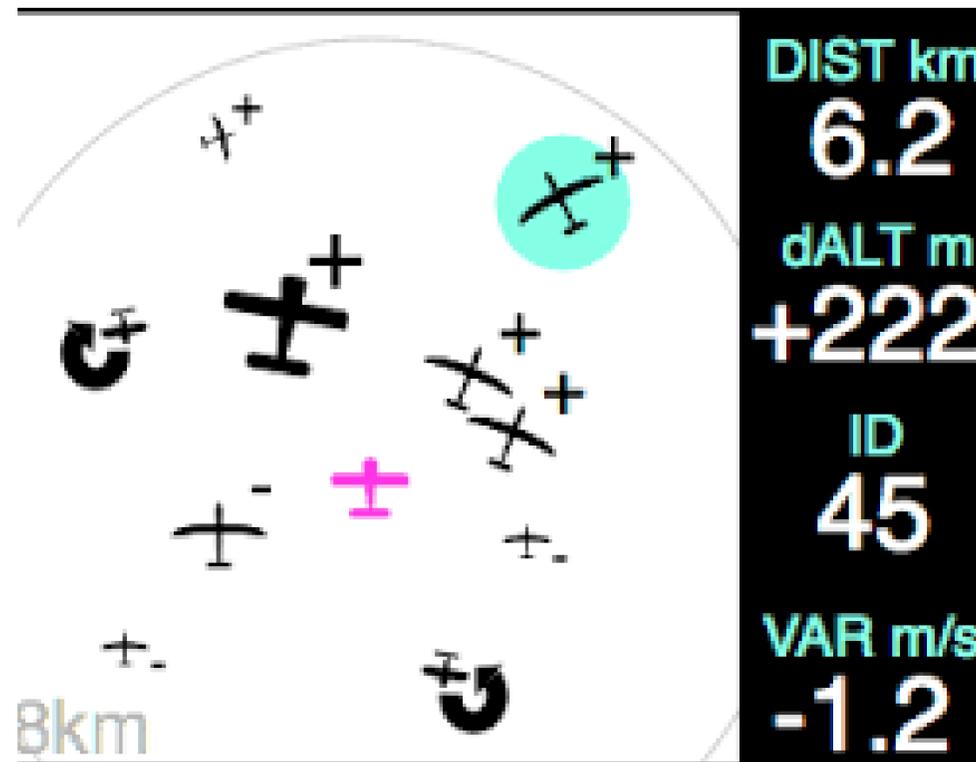
- ✓ Utilises past investments
- ✓ Affordable infrastructure
- ✓ **ADS-L 4 SRD-860**



Mobile Telephony

- ✓ Existing infrastructure
- ⊘ **Need for implementation**
- 📶 **ADS-L 4 Mobile***

*expected in 2023



High Level Roadmap

iConspicuity for Rotorcraft and General Aviation

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*... (EASA 6005(c):
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conspicuous to the U-space service providers*

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EASA Research – *iConspicuity interoperability*

Objectives

- **Review** the existing deployments, solutions, standards
- **Identify and analyze** the set of requirements enabling interoperability (incl. ATM and U-space)
- **Develop** a series of case studies, **identify** the suitable deployment scenarios and the coordination actions
- **Assess** the additional benefits for airspace users

Comprehensive roadmap for the development of technical standards addressing the interoperability

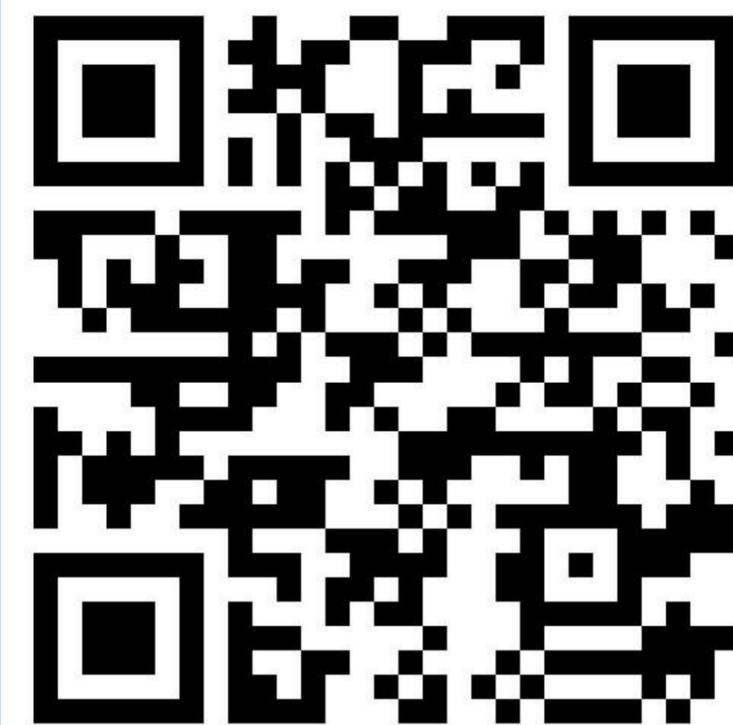
EASA Research – *iConspicuity* interoperability Timeline



Survey on the use of
electronic collision
warning and
conspicuity systems



Take part!



AVGAS Update



What is the Problem ?

European and US initiatives are in progress to remove toxic fuel additives from the Aircraft fuel market and foster the use of Unleaded fuels.

These initiatives will impact certain Aircraft operability due to potential limited availability of 100LL in Europe for the Aircraft requiring High octane fuel.

How does it impact EU fleet?

What are the possible solutions?

How can EASA help?



- Tetraethyllead (TEL) additive used in Avgas100LL identified as a Substance of Very High Concern
- **After 1 May 2025**, use of pure TEL in EU without authorization will be prohibited

Current Situation

- FAA leading authority (no AVGAS engines certified by EASA) -> EASA closely monitoring
- TEL exemptions possible **after 1 May 2025**
- GAMI STCs to be validated by EASA (after application by GAMI)
- Alternative fuels (UL91) available for some engines

Other Considerations

→ Engine/aircraft conversions

A high-octane unleaded avgas could add 20.000 € or more during engine TBO (~2000h)

→ CS STAN

Could be reviewed to offer more fuel alternatives (only if technically possible)

Questions?

Slido.com