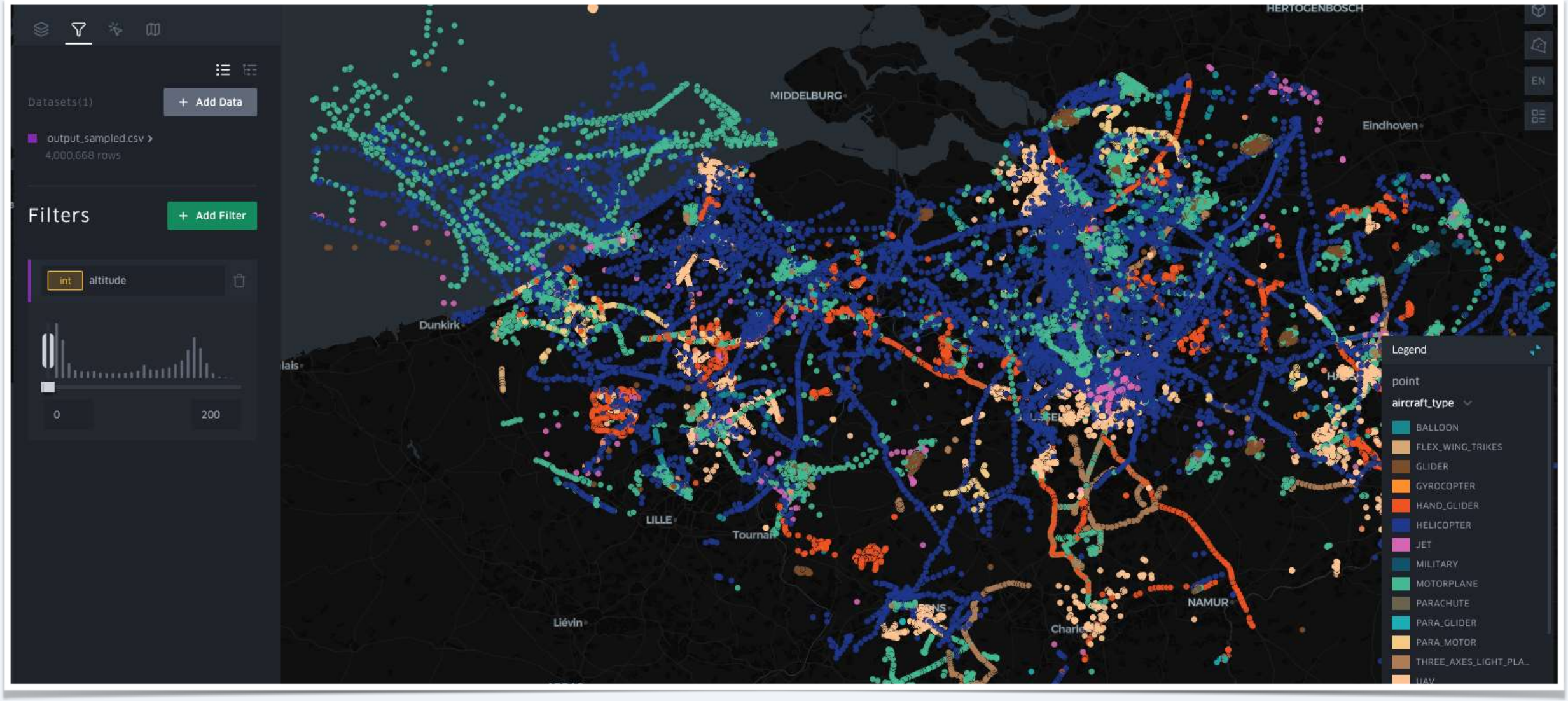
Electronic Conspicuity

Tristan Fily

BELGIUM TRAFFIC DIVERSITY BELOW 200 METERS IN BELGIUM - SEPTEMBER 2025



AS A DRONE OPERATOR, MAXIMISE TRAFFIC VISIBILITY

SafeSky App

100 000 pilots
65 000 aircrafts
14 aircraft classes
40 countries

EASA ADS-L Coalition

Re-broadcast:

SkyEcho 2
PowerFLARM Fusion
PilotAware
Levil

16 000+ ground stations worldwide

ADS-B
FLARM
Mode-S (MLAT)
ADS-L
FANET
Flying Neuron
Pilot Aware
MicroTrack
OGN-Tracker
Remote ID

Navigation softwares

EasyVFR
Air Navigation Pro
XC-Track
Gaggle
eVario
Wing-It
TheFlightVario
XC-Guide
Airsports NO
CloudDash
SwissNavX
Volandoo

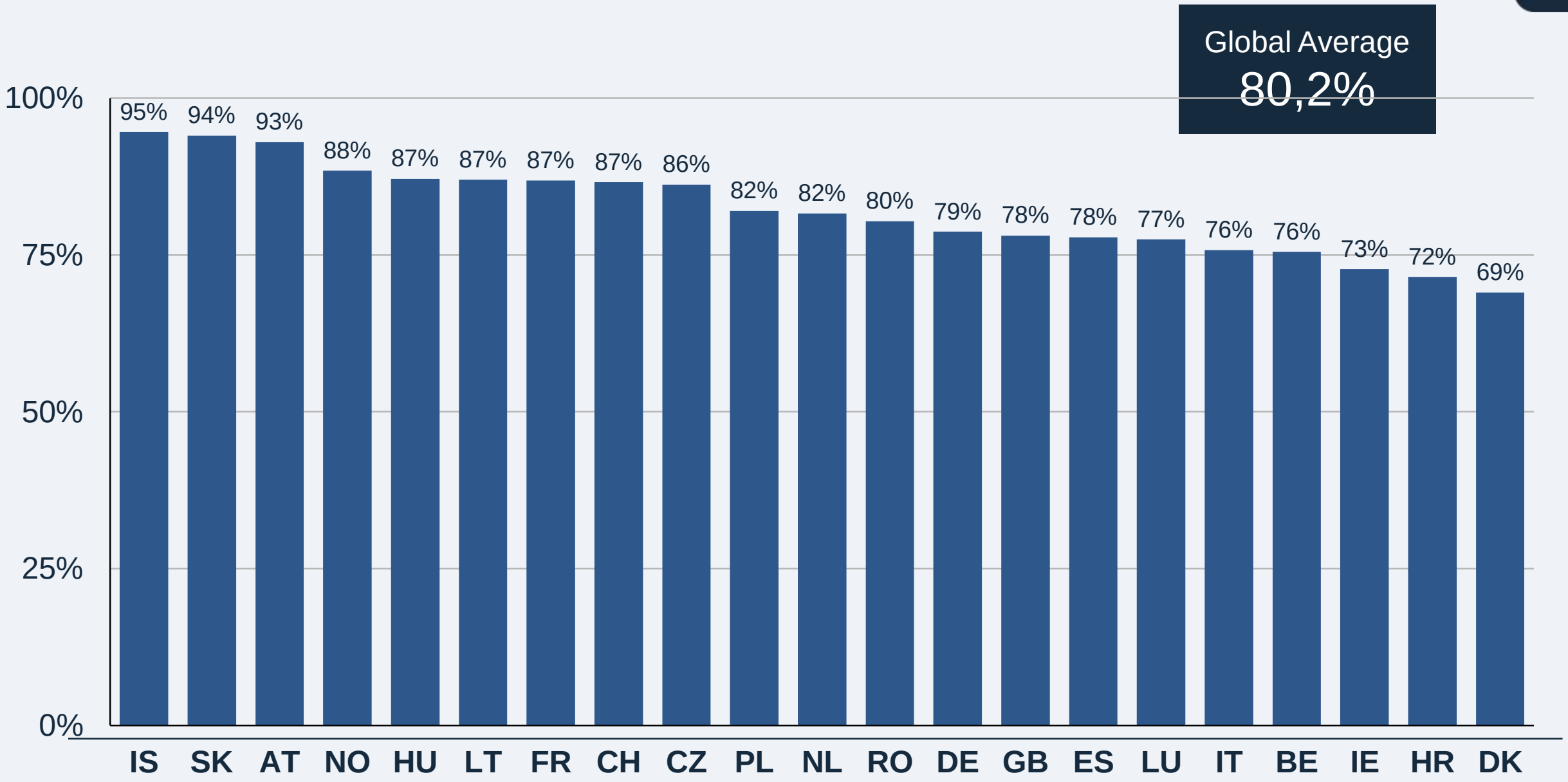
Drone manufacturers and operators

Norsk Luftambulanse
Norwegian police
Cavok-UAS
SkeyDrone
Helicus
Field Group
Naviation
Romvesen
Aviant
Anra
DroneSense
DroneMatrix
Wis
AirDodge

Electronic devices

Aero tracker
FlyMaster
Syride
SkyRecon
SkyTraxx

SAFESKY INTERNET RECEPTION UP TO 5000 FT AGL IN EUROPE



Electronic Conspicuity

AESA UAS Vision

Roberto Gándara Ossel

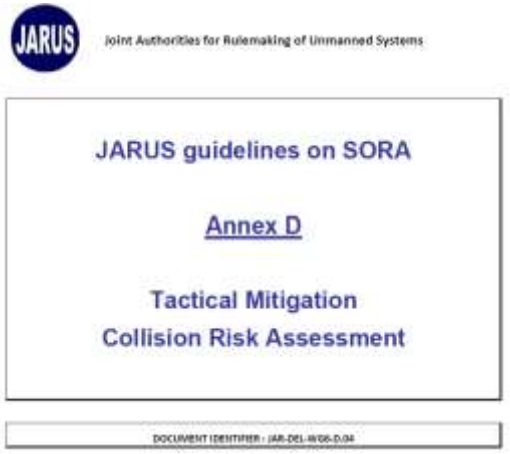
Enabling the development and nationwide expansion of BVLOS.

- Technological DAA to achieve **BVLOS in ARC-b** + U-space to scale
- GA iConspicuity (out) + UAS Operators/USPs (in) as the more promising Detect System.
- DAA validation though SORA Annex D:
  - Detect – Out/In Technology with validated standards + USP Warnings
  - Decide – Reaction times and Distances to activate contingency procedures
  - Avoid – Predefine avoidance maneuvers + USP help to scale
  - Feedback loop – Efficient return to the intended operation with USP clearance to scale

RIGITECH

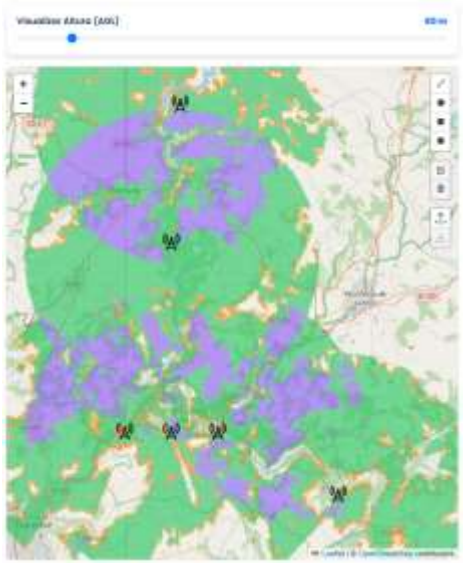
Study of Unmanned VTOL Drone Operations in Shared Airspace

Can a detect and avoid system onboard a UAV reduce the risk of a mid-air collision to enable safe beyond visual line of sight operations in a shared airspace with cooperative aircraft?



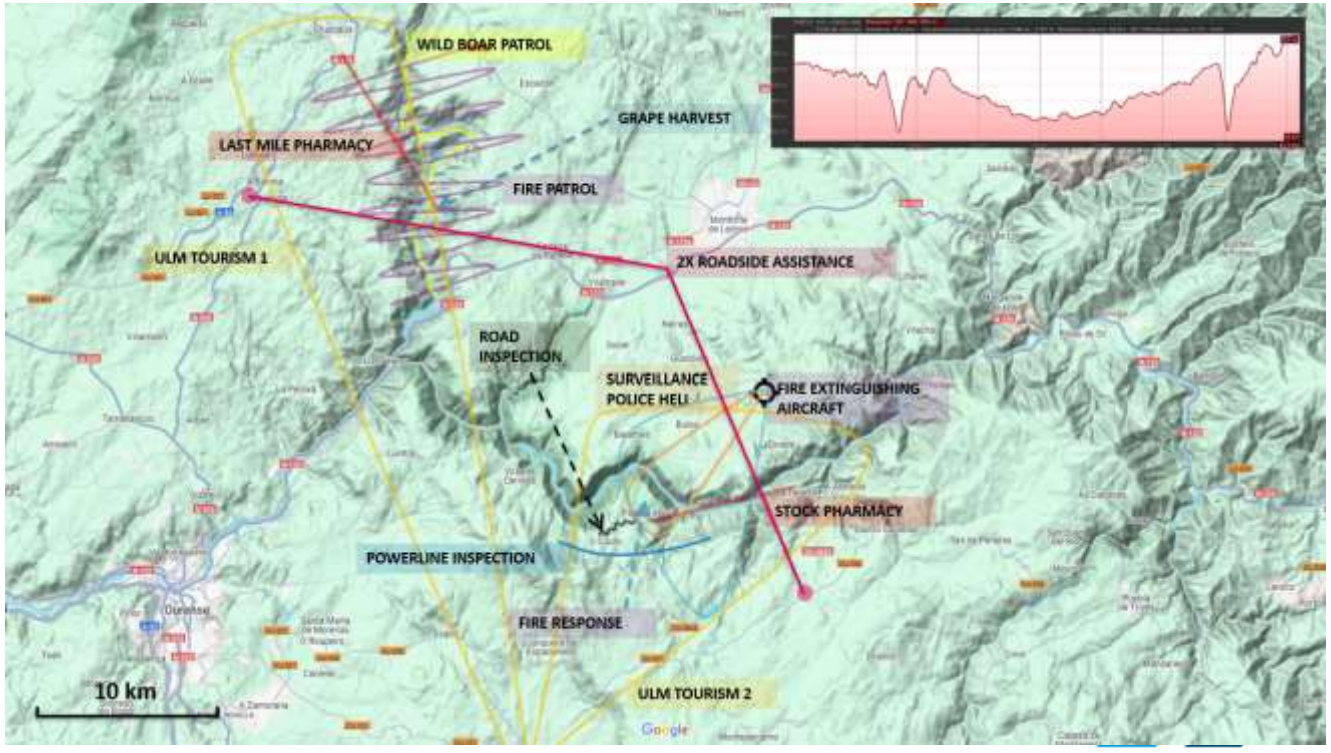
Ground Infrastructure needed

- Analyzing possible band levels of operations:
  - up to 60 m VLOS o ARC-a BVLOS
  - 60 m to 120 m BVLOS UAS operation in ARC-b
  - 120 m to 150 m safety buffer
  - more than 150 m normal GA – declare intention to go to lower bands – USP/CIPS
- Lower bands/UAS with 5G and higher bands/GA with RF iConspicuity
- How many iConspicuity Antennas? What is the 5G coverage with altitude?



Ribeira Sacra Collaboration Project

- Administrations: AESA, DGAC, Eurocontrol, ENAIRE, INECO
- Manned operators: RACE, National Police, Civil Guard
- Unmanned operators: CATUAV, CATEC, Pirineos Drones, Aeromedia…
- Manufacturers: DJI, RigiTech, Avincis, Gradiant, Fuvex
- On ground Antennas: ENAIRE, Telefónica 5G, American Towers
- USpace: ENAIRE, ITG



Electronic Conspicuity

Low power ADS-B based EC is currently legal in the UK, Australia, New Zealand, and South Africa SkyEcho 2 on 1090, Low Cost € 600 - € 280 rebate

FAA recently flight-tested EC (SkyEcho on 978) as part of the BVLOS draft rules

Canada also working on EC rules

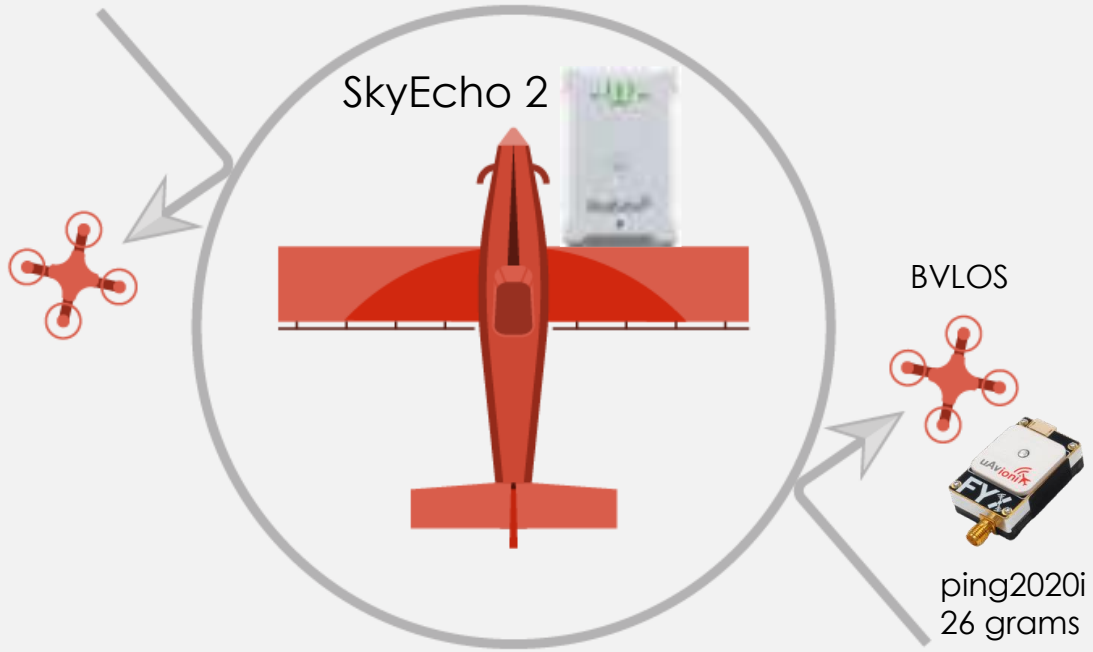
UAS 978 ADS-B In/Out & 1090 In from 2026 in UK

BVLOS Ops in TRAs (U-Space) from 2026 in UK

Crewed a/c EC ADS-B mandate from 2029 in UK

FIS-B/TIS-B/FIS Displays - from 2027 in UK

EC with ADS-L 860 for Crewed a/c is UNSAFE



ADS-B OUT ON MANNED AIRCRAFT **ADS-B IN** ON UAS

= SAFER SKIES uAvionix

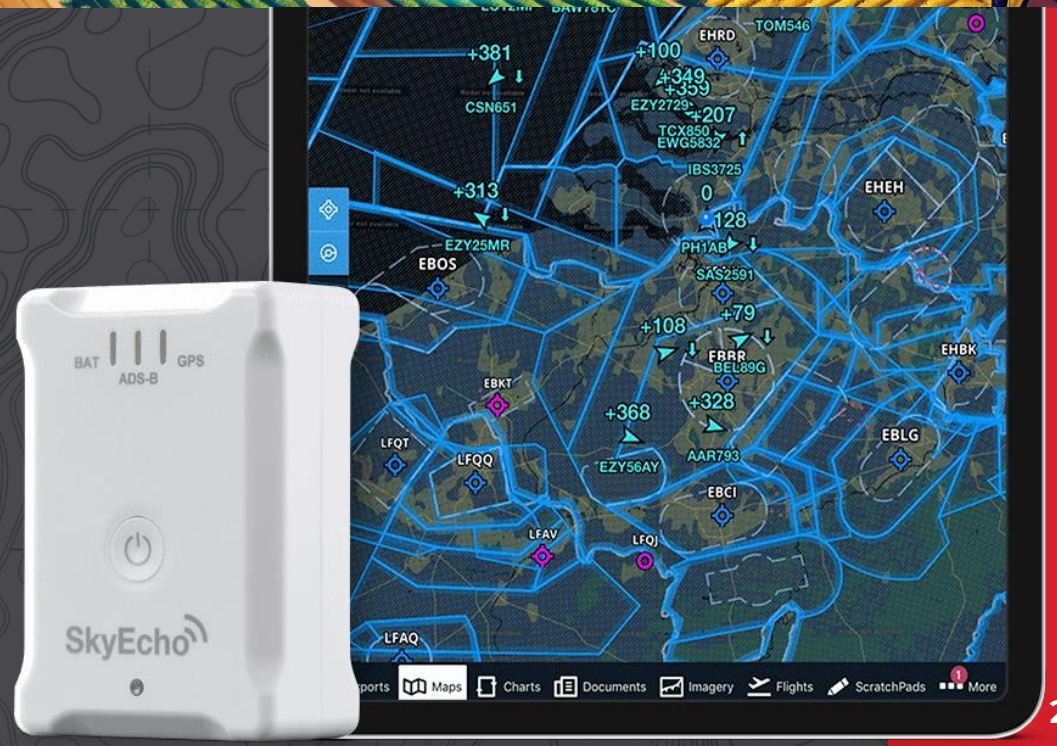
FAA Right of Way (RoW)

One of the recommendations was a change to RoW defined in 14 CFR 91.113

Give the UAS RoW over a crewed aircraft in airspace below 400’ AGL **IF AND ONLY IF** the crewed aircraft was not broadcasting its position on ADS-B OUT.

FAA adopted this recommendation and has opened the path to portable low power ADS-B as a means of compliance for those aircraft that do not operate in rule airspace

Key is they stick with ADS-B only, 1090 and UAT



uAvionix

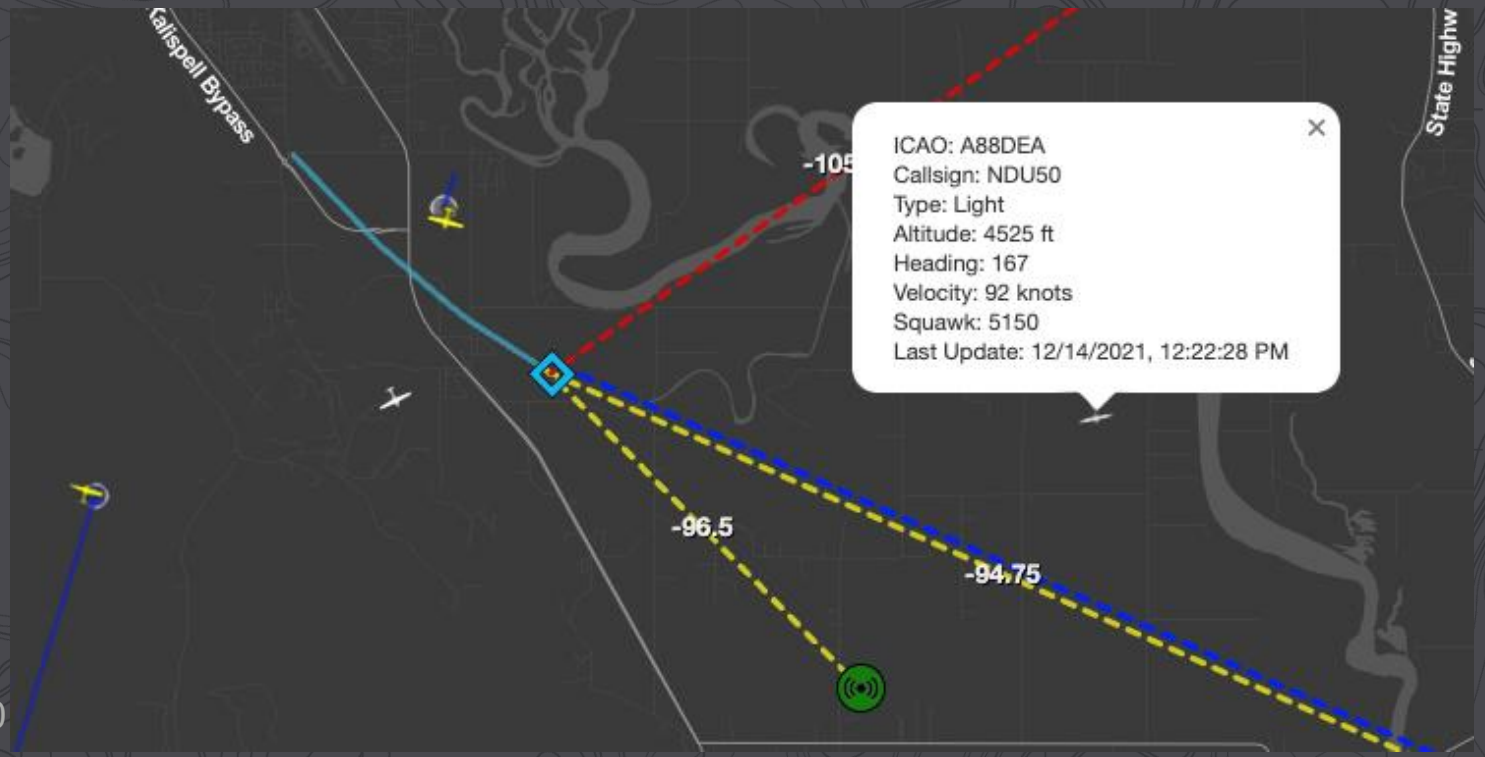
Low Level (EC) Surveillance

Non-Cooperative UAS Traffic

TIS-B

Cooperative Traffic

Non-Cooperative crewed Traffic

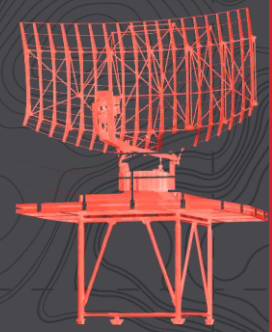


Integration of multiple dual-band (978/1090 MHz) ADS-B Sensors MLAT Mode S

truSky™ ADS-B spoofing detection

FLARM, Remote ID/ADS-L on 860

ADS-L enabled on 1090, 978



Radar feed from ANSP

UTM / U-Space

uAvionix