



Q&A



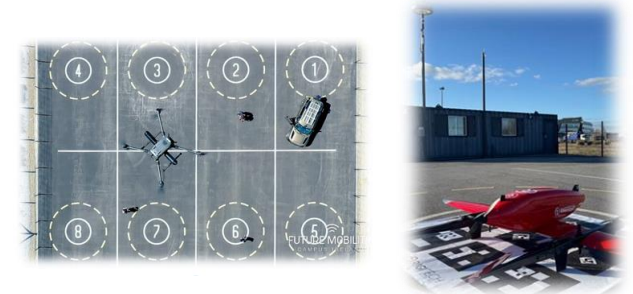
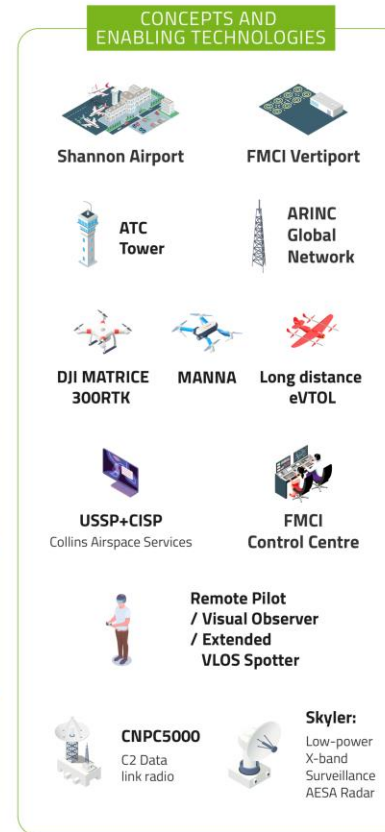
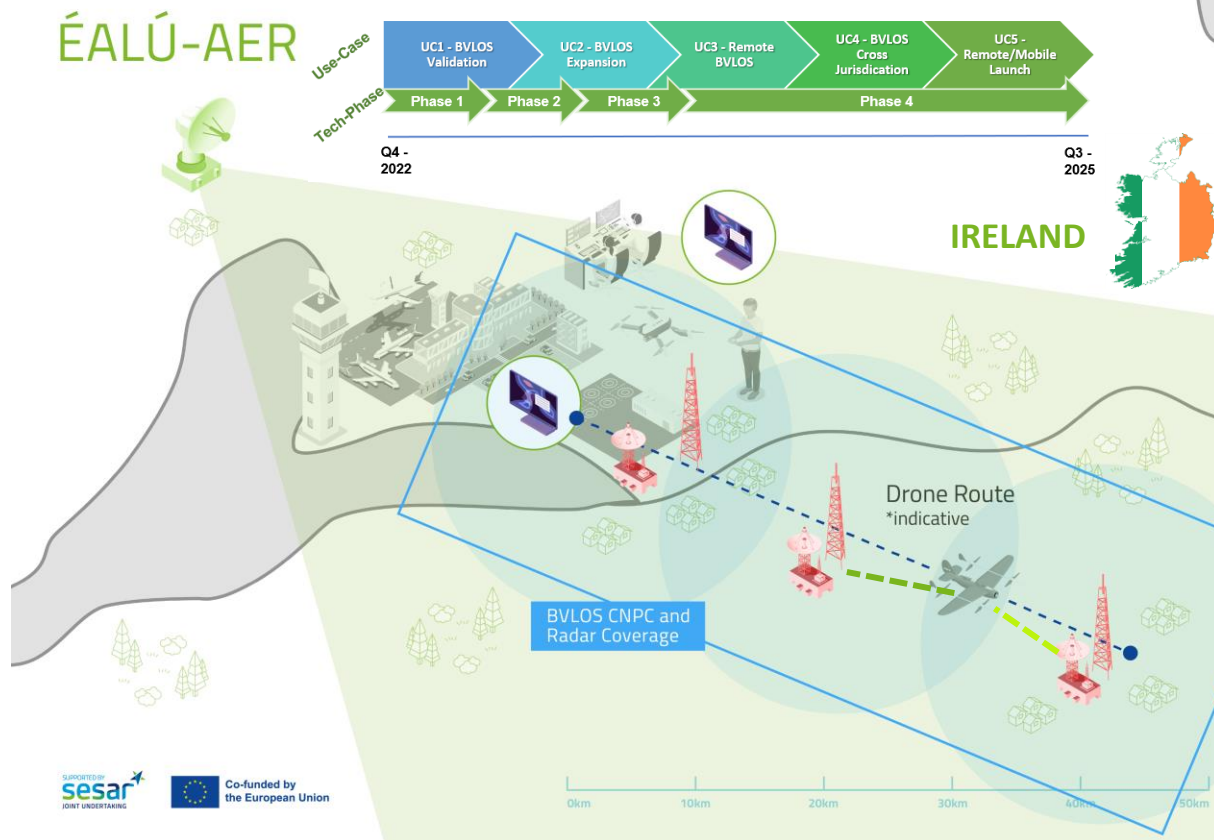
Javier Camacho Font



Co-funded by
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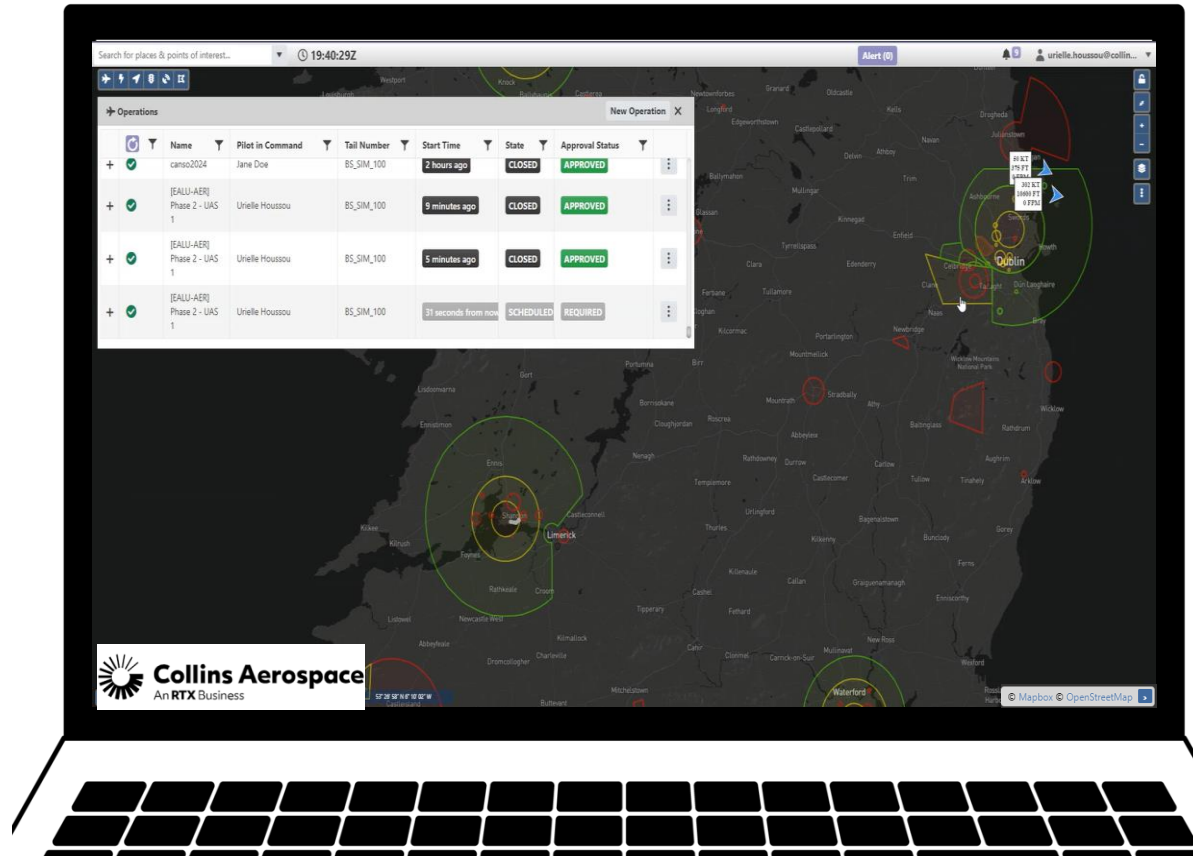
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ÉALÚ-AER: Enhanced Automation for U-Space/ATM integration

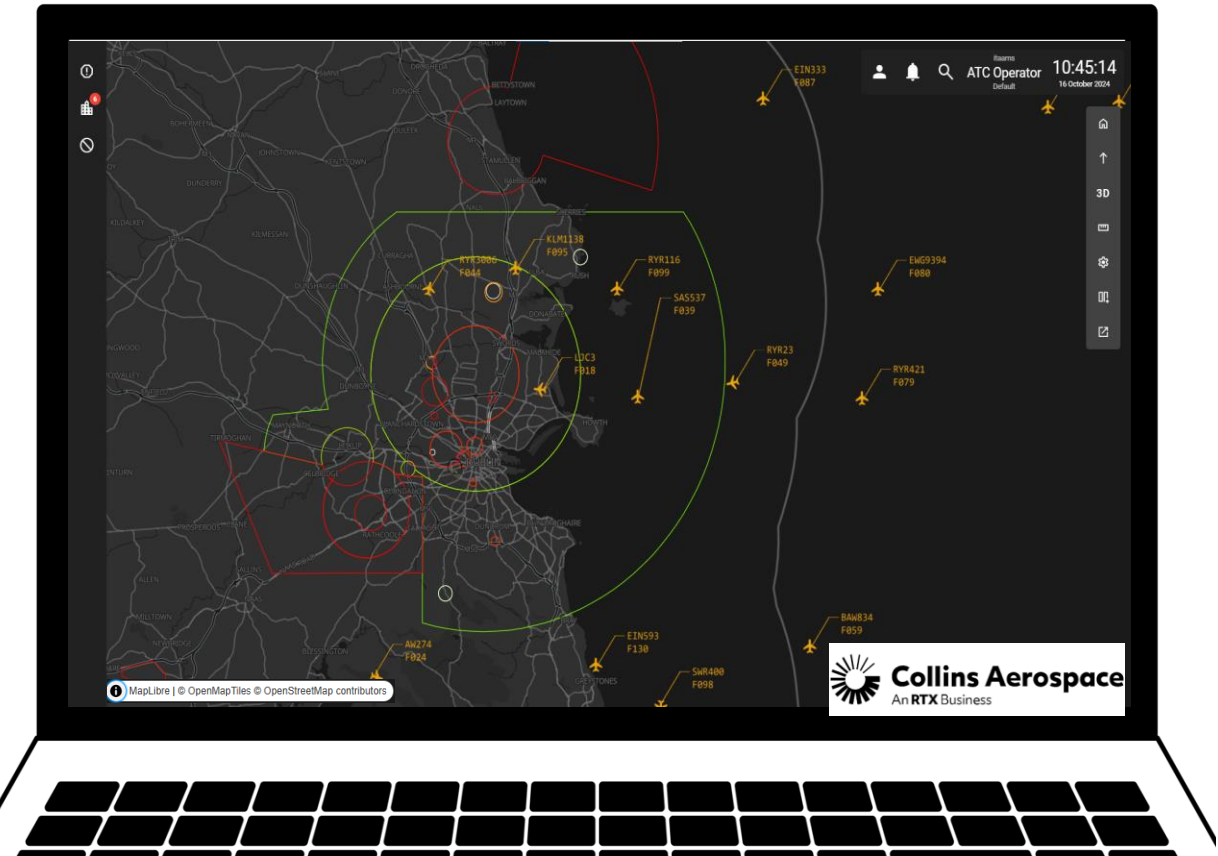


- Deploy and demonstrate an **end-to-end modular U-Space infrastructure** to support **UAS BVLOS operations** at the Future Mobility Campus Ireland vertiport/droneport next to International **Shannon Airport**.
- U-Space architecture to be deployed involving different Collins Aerospace systems: **3D AESA Radar (Skyler®)** as Surveillance, **CNPC5000** as C2 link, **ARINC Global Network** as backhaul, **FlightAware** ADS-B Data and **Collins Aerospace Services (CaS)** as U-space Service Provider (**USSP**) and Common Information Service Provider (**CISP**).

“Collins Airspace Services” – U-space/UTM platforms



USS Client – as USSP

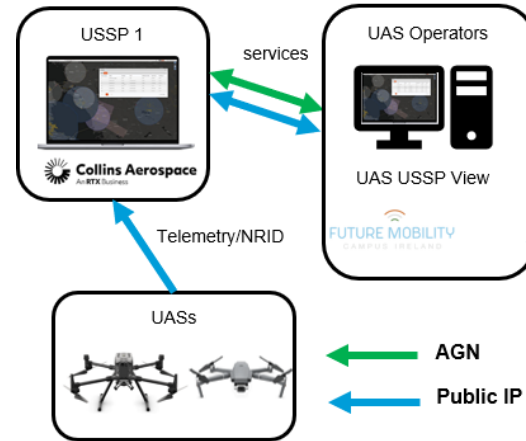


ATS Client – as CISP HMI

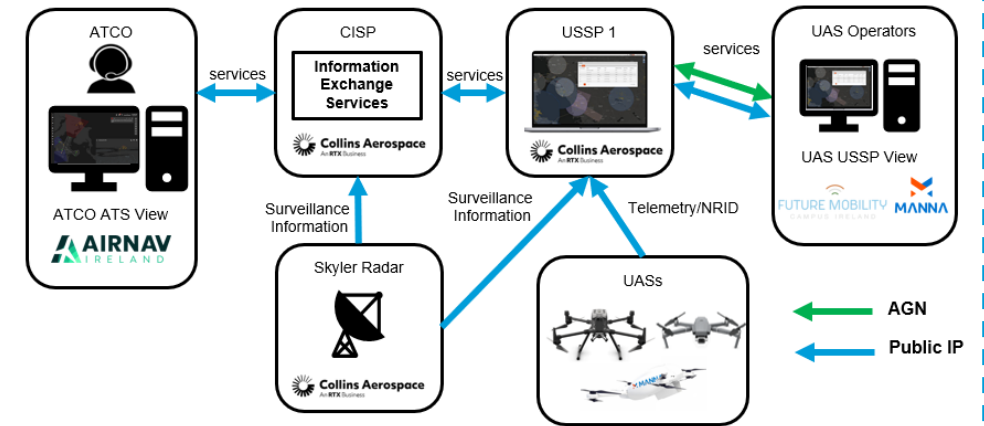
ÉALÚ-AER Phases demonstrations Architecture

ÉALÚ-AER

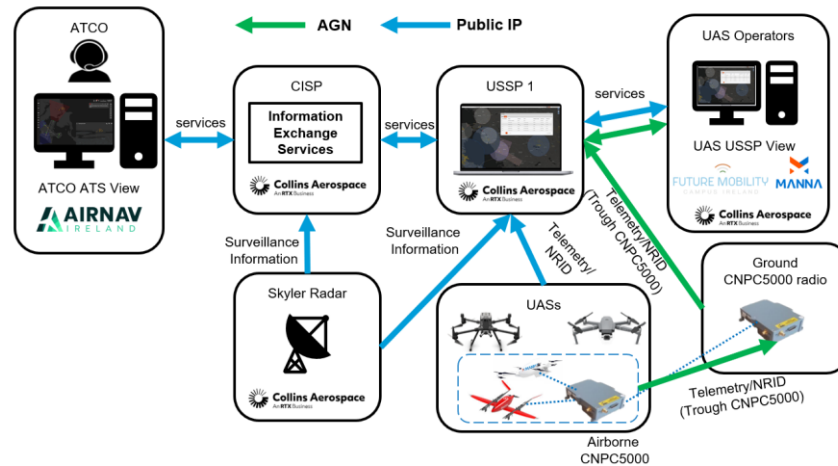
Phase 1 Architecture



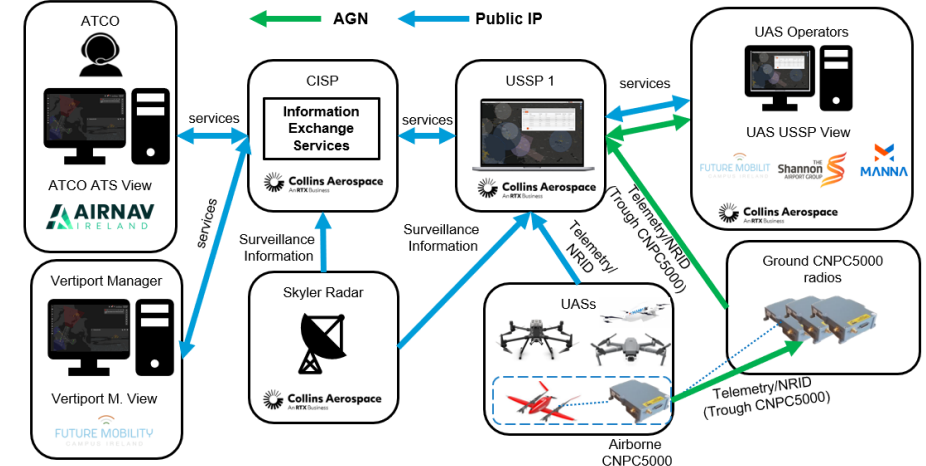
Phase 2 Architecture



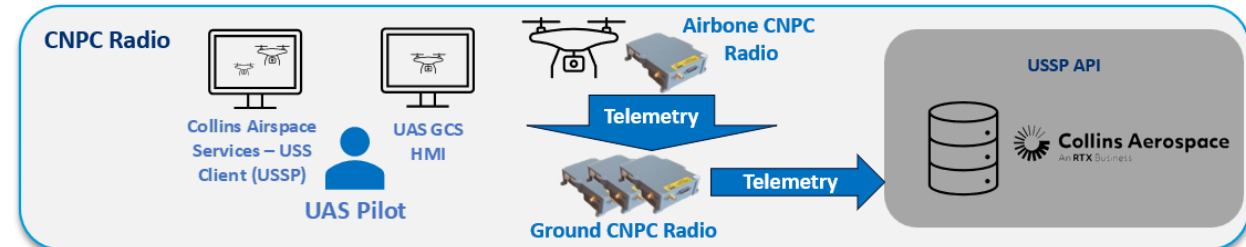
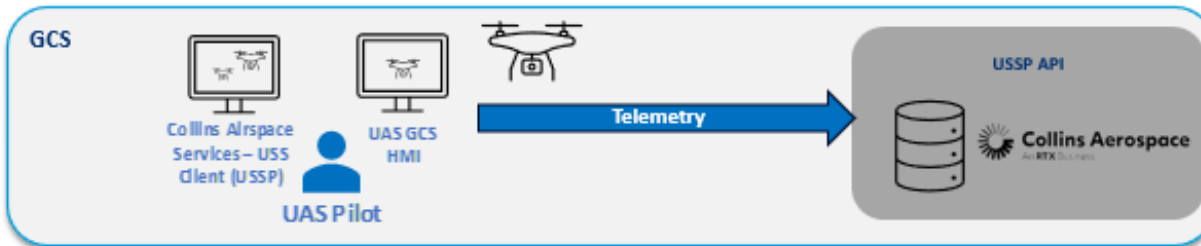
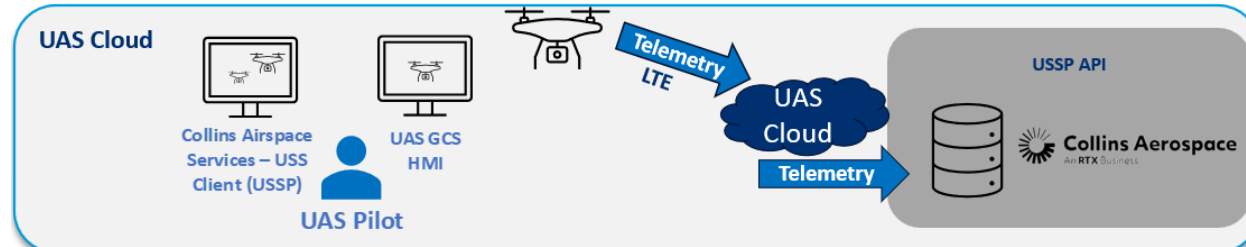
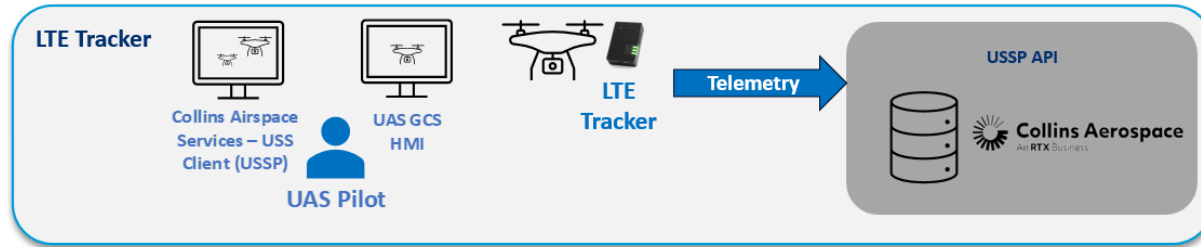
Phase 3 Architecture



Phase 4 Architecture

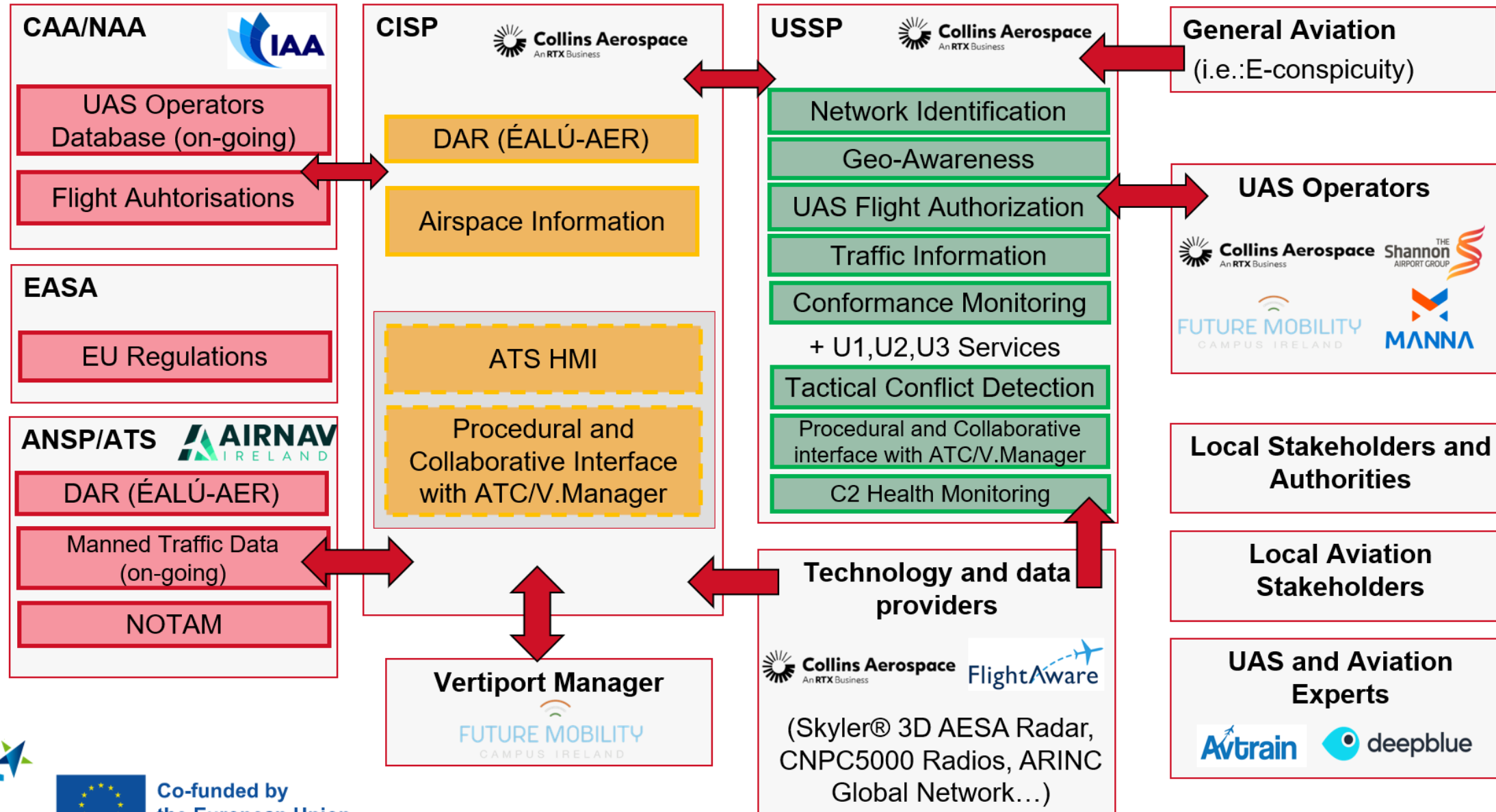


UAS integration with USSP

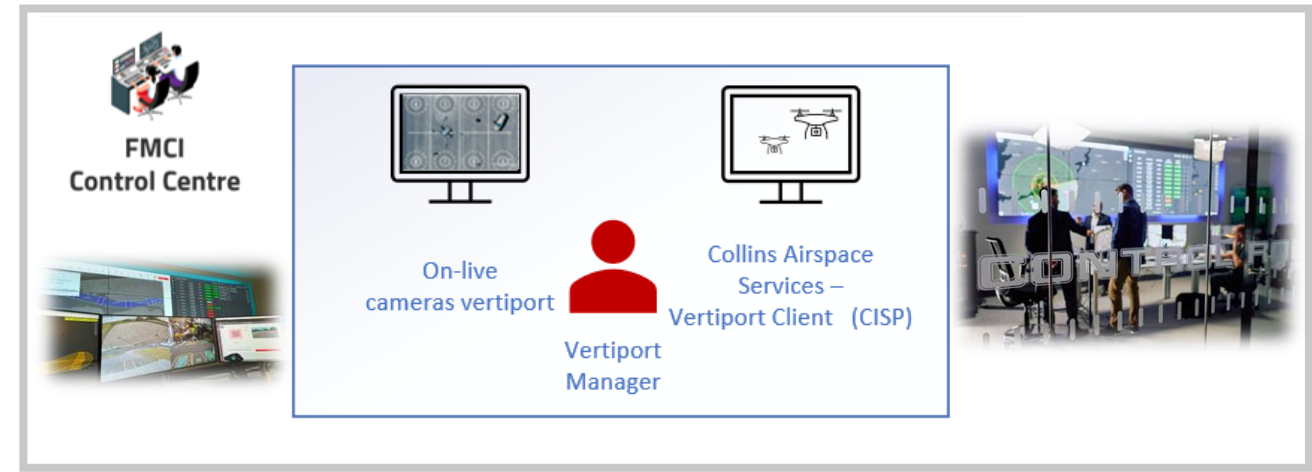
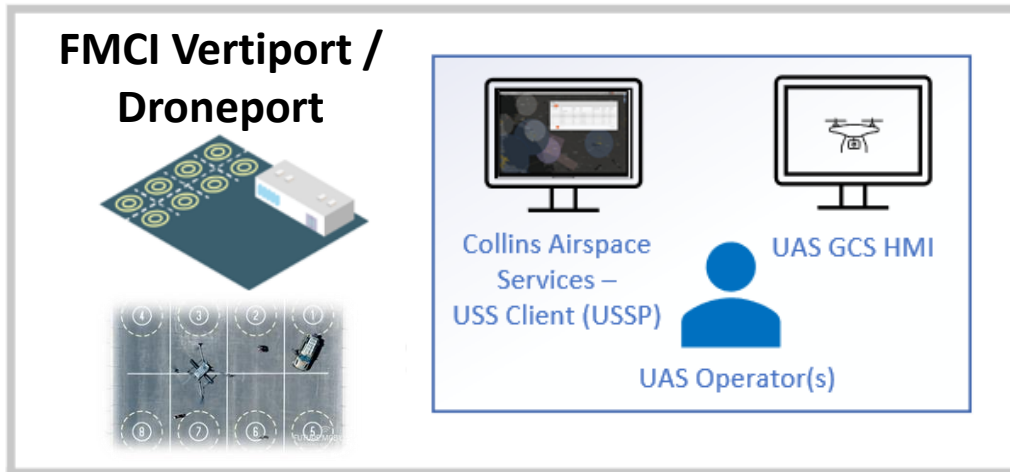
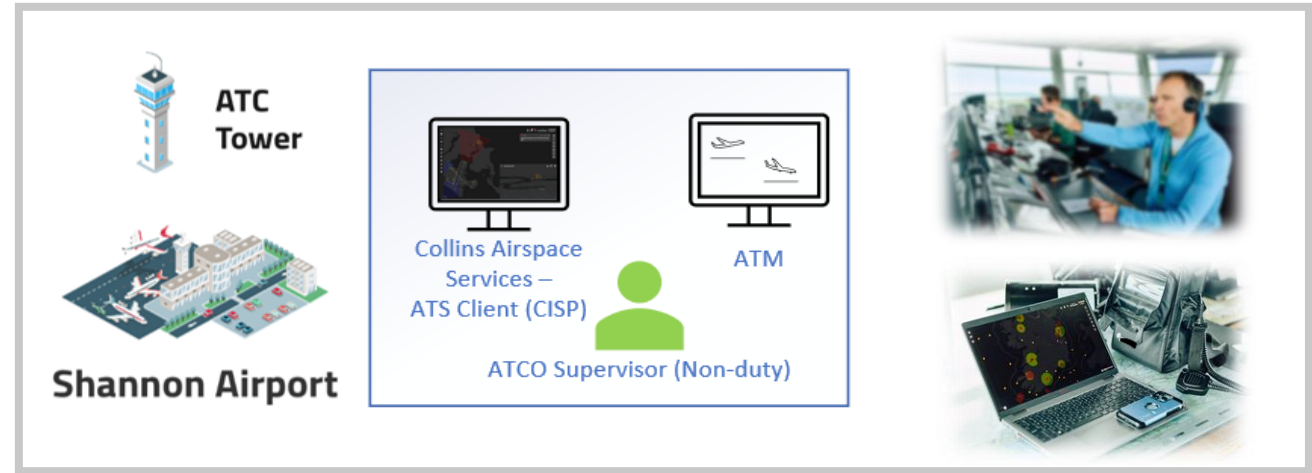


ÉALÚ-AER U-space architecture

ÉALÚ-AER

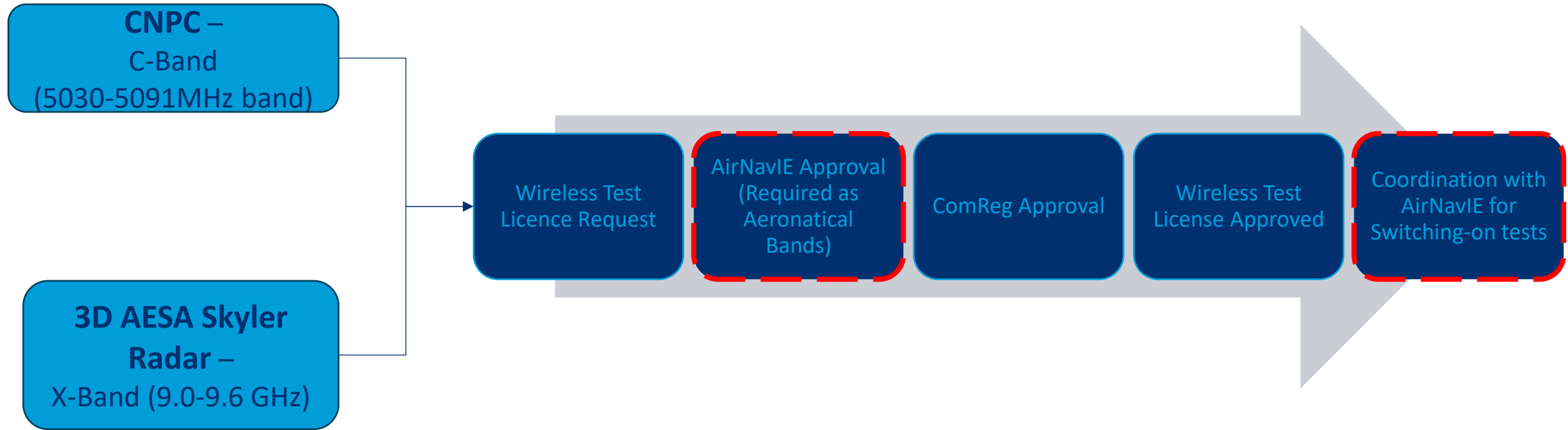


Physical Distribution U-space actors



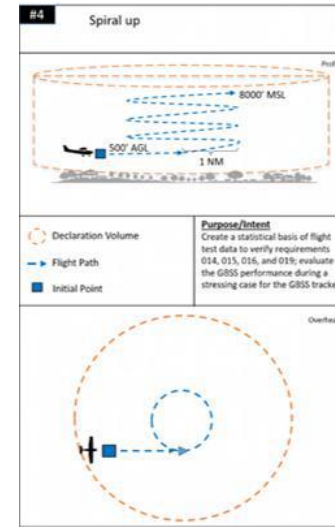
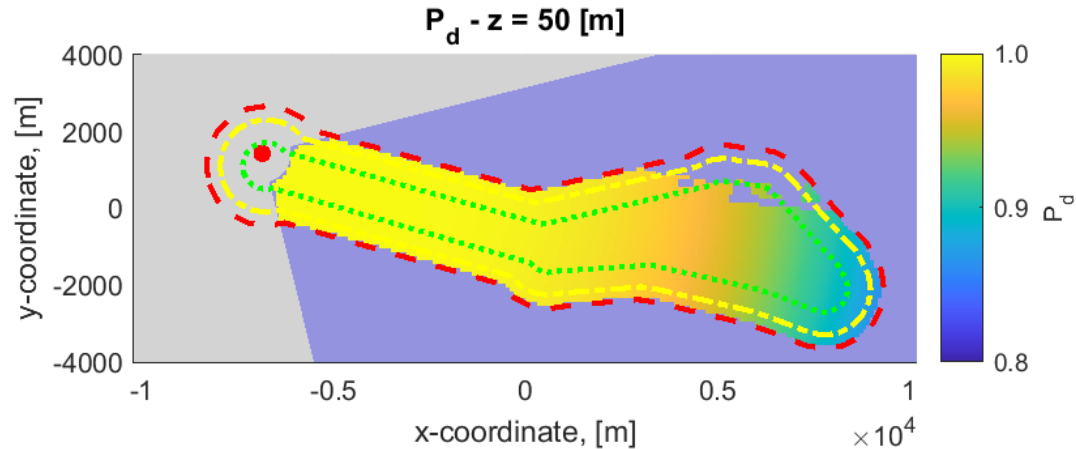
3D AESA Radar (Skyler®) and CNPC – Frequency licenses

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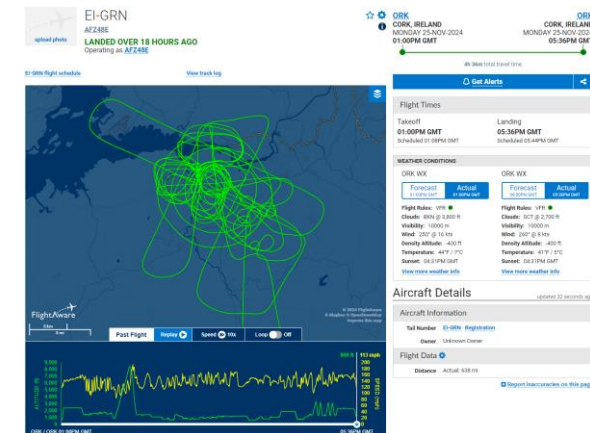


USSP integration with 3D AESA Radar (Skyler®) - Surveillance coverage analysis and RTCA DO-381A Test Cards

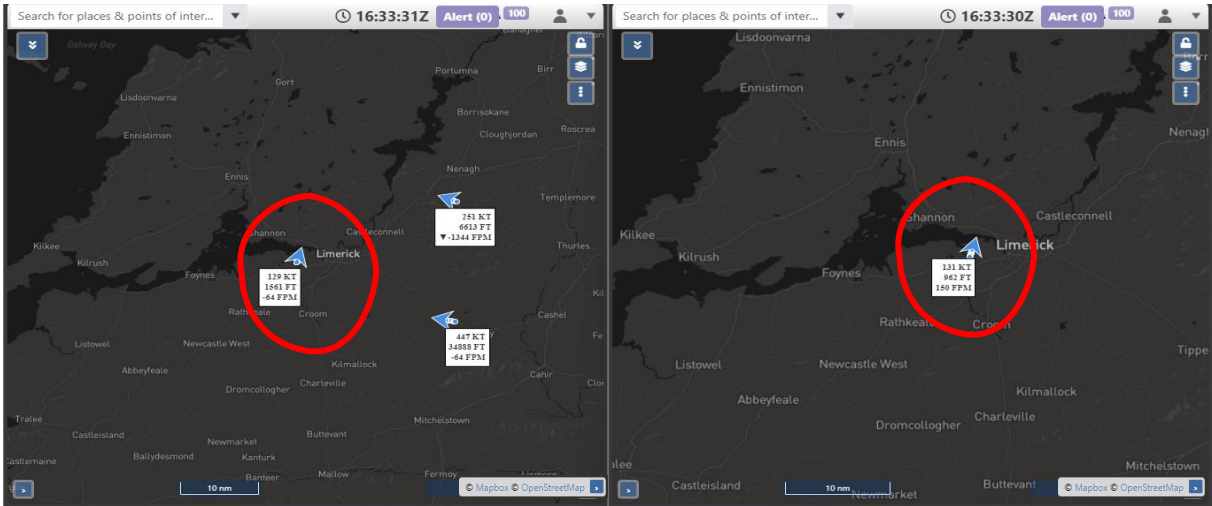
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Example of Test Cards - Test Card #4 - Spiral - Skyler Calibration - Exercise #02 – On the left RTCA-DO381A test card: ©RTCA, Inc. Used with permission. All rights reserved



USSP integration with 3D AESA Radar (Skyler®)



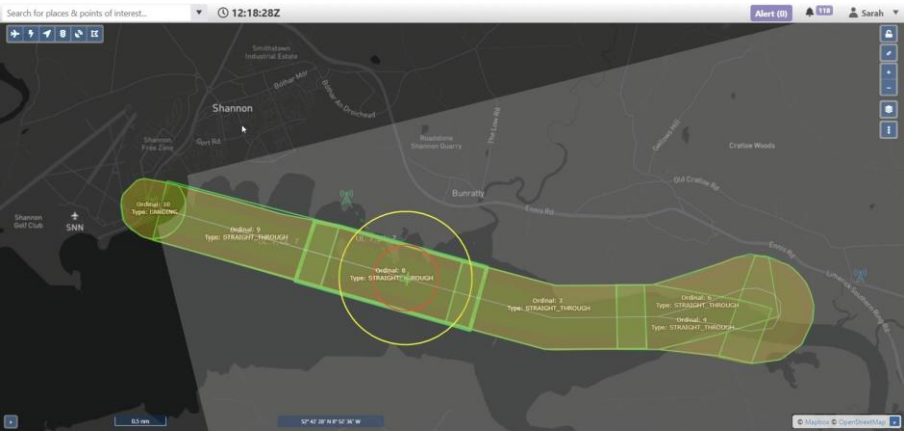
Skyler ADS-B Feed

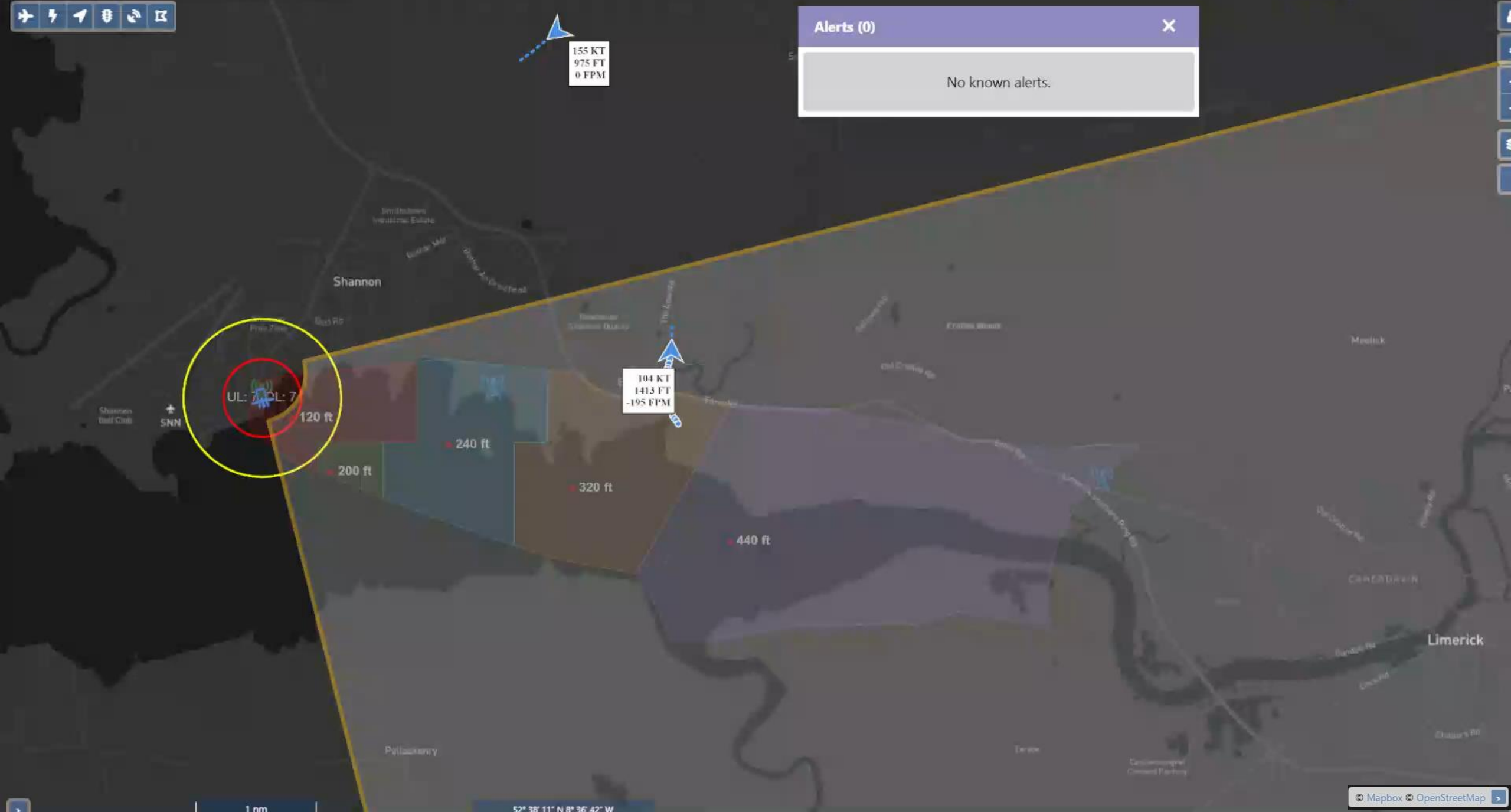
Skyler Primary Radar feed

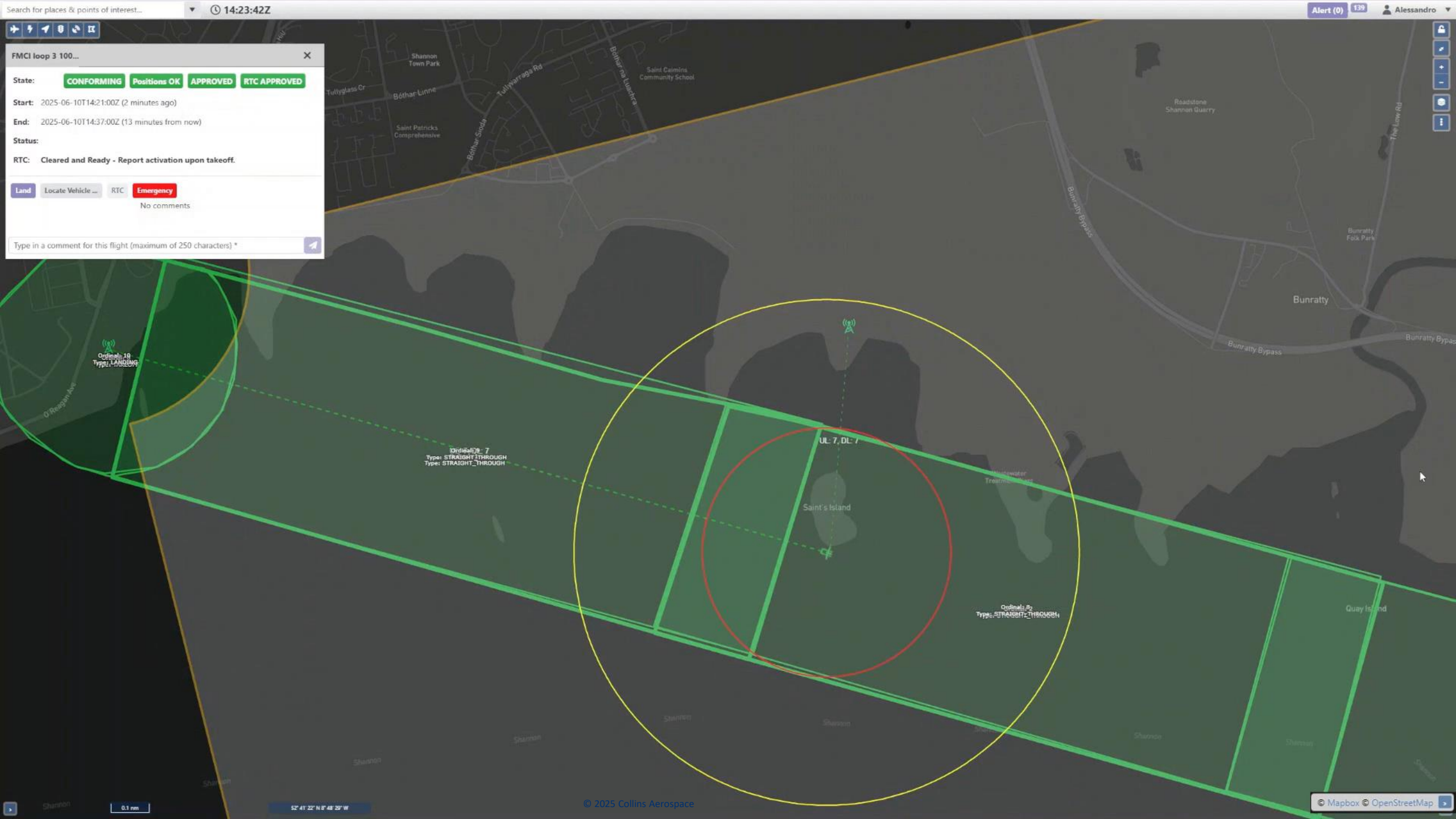
USS Client - USSP



ATS Client (CISP)– Track fusion ADS-B and Skyler Radar



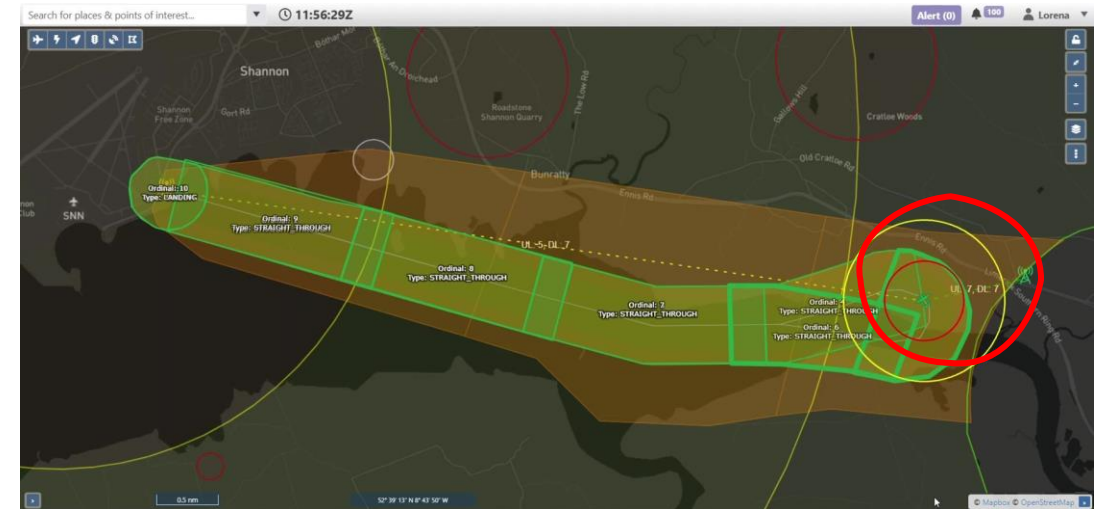




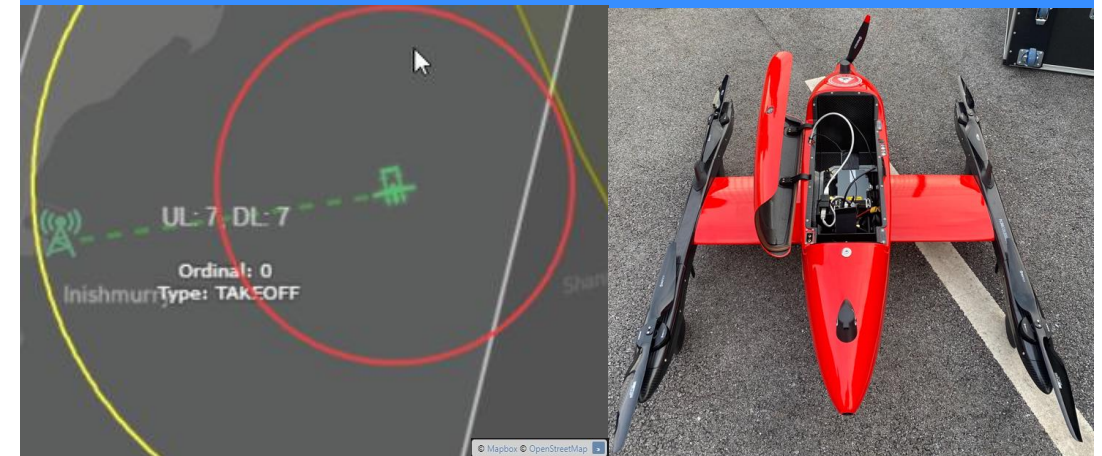
USSP integration with CNPC5000

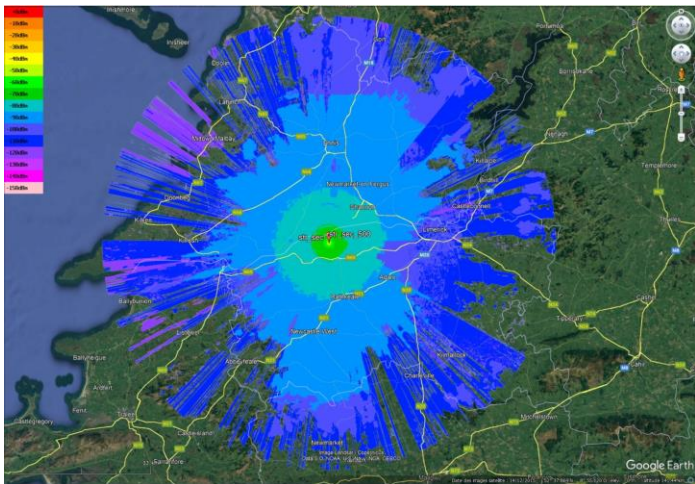


CNPC5000 Radio

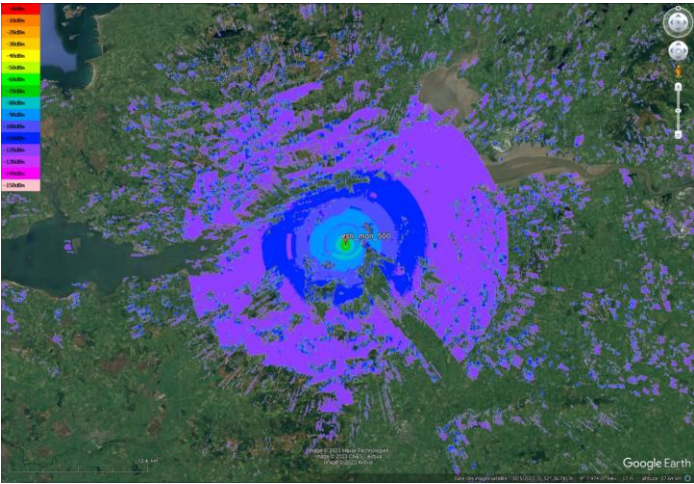
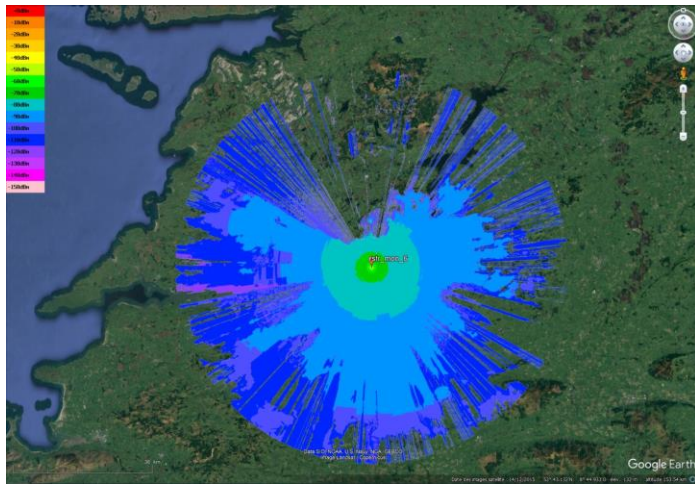


CNPC5000 Radio – C2 Link





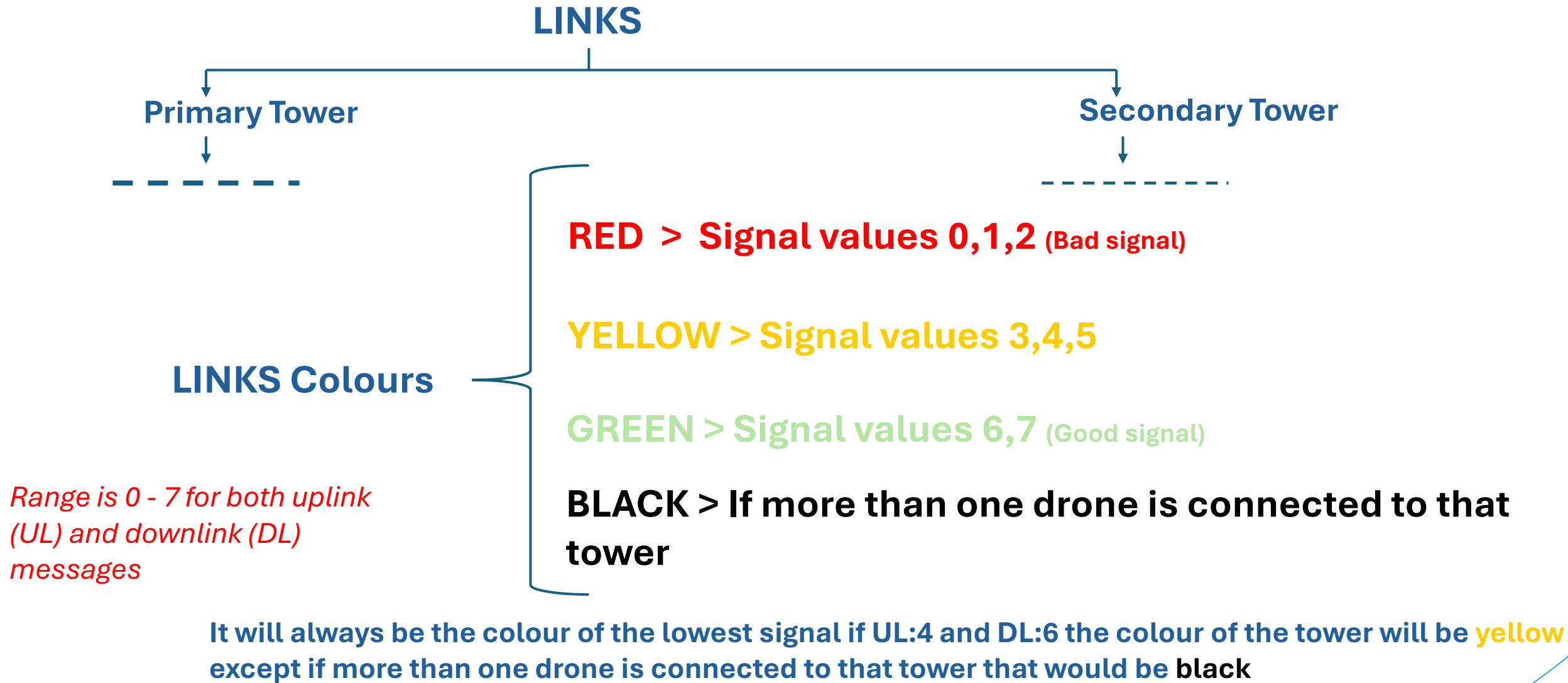
Propagation CNPC ground - Image Landsat/Copernicus, Data SIO, NOAA, U.S Navy, BGA, GEBCO

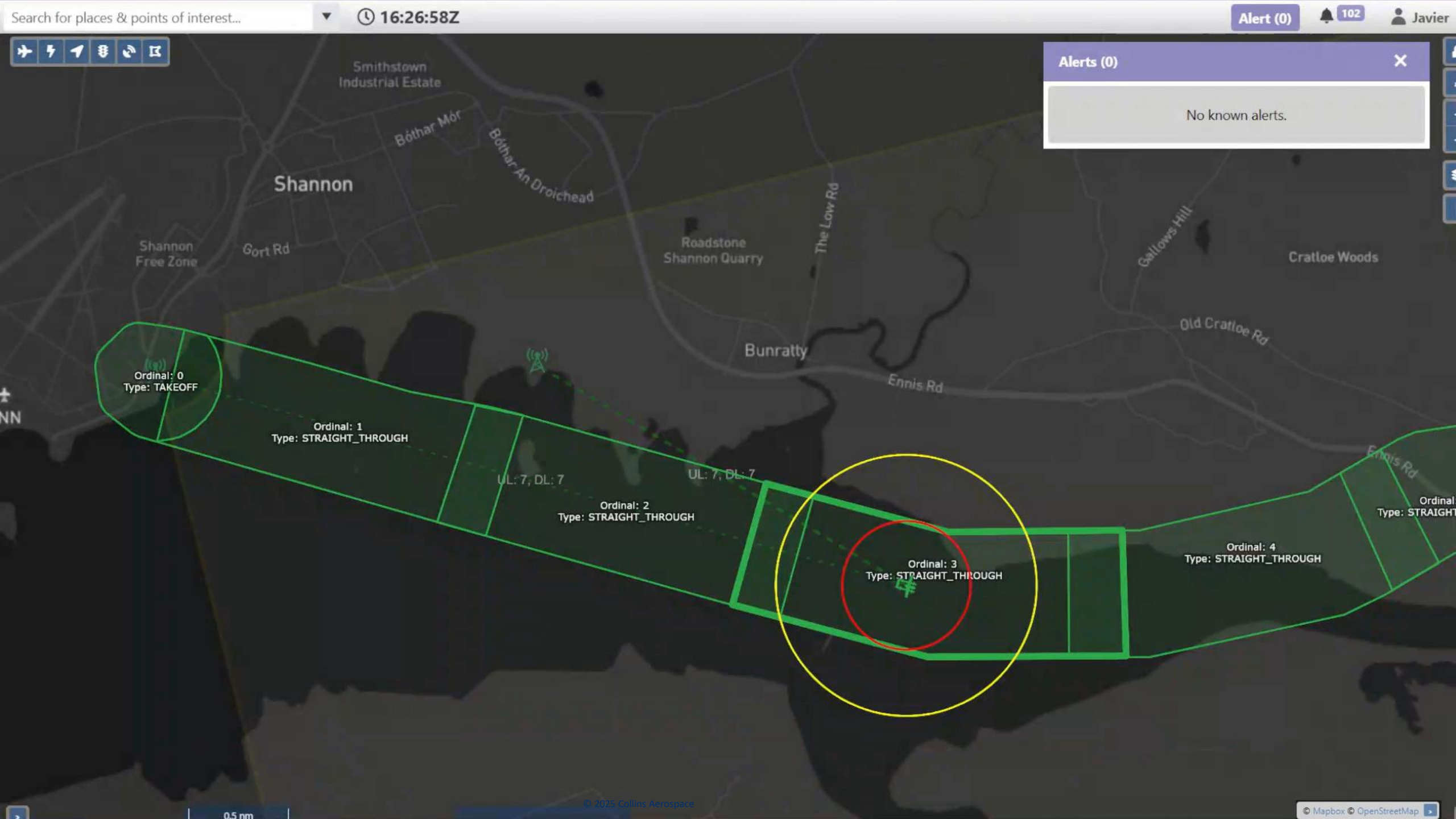


Propagation CNPC on UAV 500 ft - Image © 2023 Maxar Technologies, CNES/Airbus, Airbus



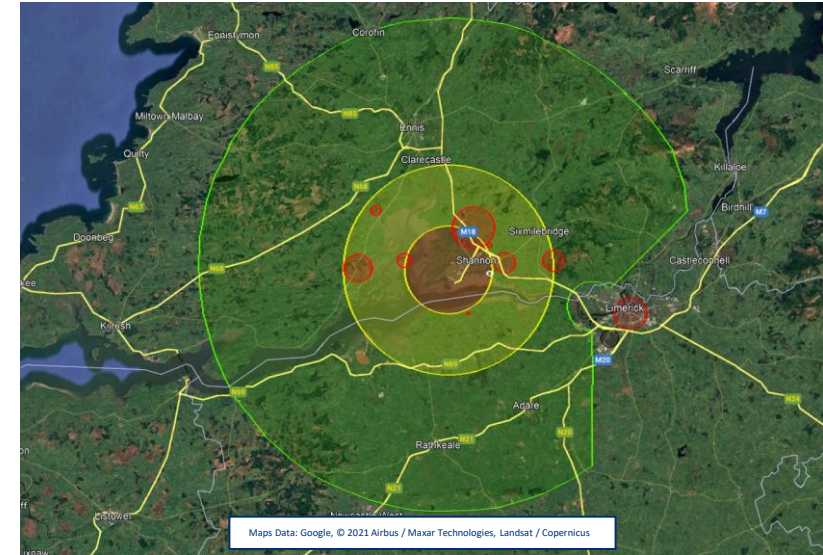
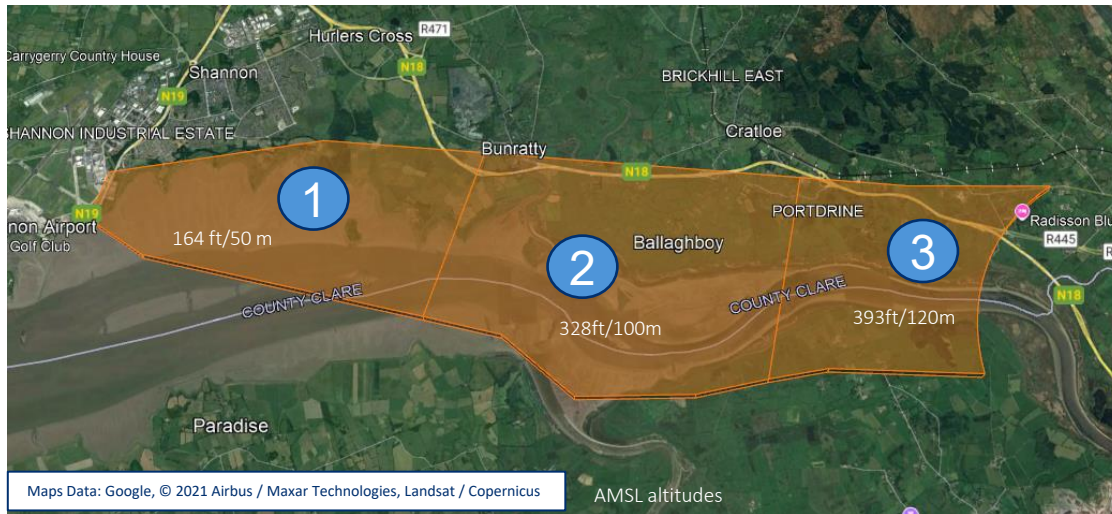
Simulation CNPC radios- Map Data ©2025 Google



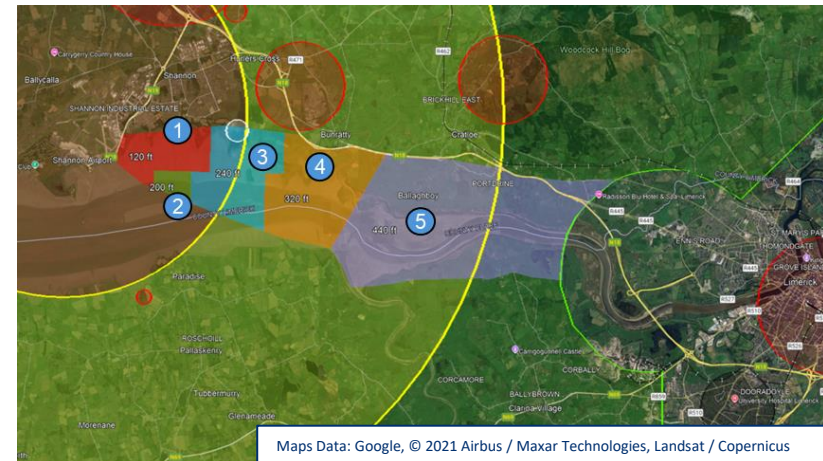
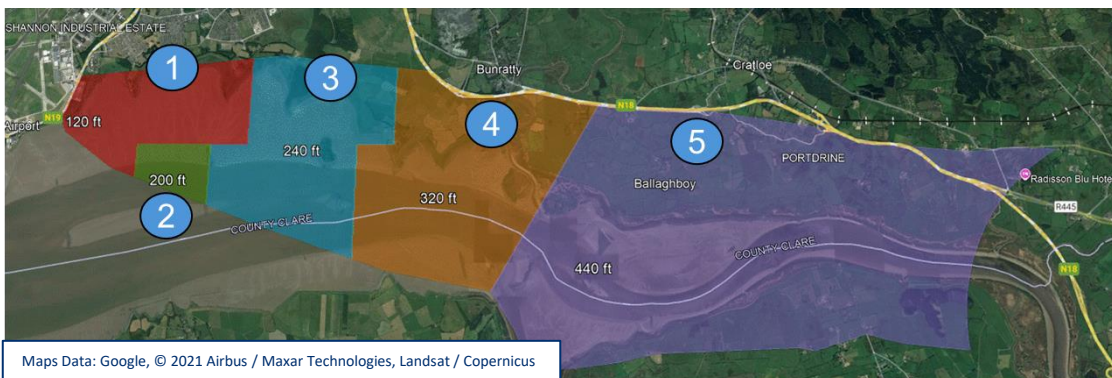


ÉALÚ-AER U-space approach in actual Class-C airspace

ANSP/ATC coordination Stage 1



ANSP/ATC coordination Stage 2





Operations New Operation X

		Name	Pilot in Command	Tail Number	Start Time	State	Approval Status	
+	✓	EALU-AER FMCI Loop Test	Javier Camacho Font	SIM_COLLINS_A...	36 days ago	CLOSED	APPROVED	⋮
+	✓	EALU-AER FMCI Loop Test 2	Javier Camacho Font	SIM_COLLINS_A...	36 days ago	CLOSED	APPROVED	⋮
+	✓	Demo#4 - Radisson Blu Hotel	Javier Camacho Font	SIM_COLLINS_A...	36 days ago	CANCELED	APPROVED	⋮
+	✓	Demo#4 - Radisson Blu	Javier Camacho Font	SIM_COLLINS_A...	36 days ago	CLOSED	APPROVED	⋮

Flight actions
View details
Clone operation
Download operation events

Alerts (0) X

No known alerts.





Q&A

THANK YOU FOR YOUR ATTENTION

Javier.camachofont@collins.com