

Supporting
European
Aviation



U-space services for UAS/UAM airspace integration - Role of EUROCONTROL

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NETWORK
MANAGER



Research & Innovation

- Co-founder of **SESAR Joint Undertaking**
- In kind contribution to Research and Innovation
- Key research projects:

SESAR U-space projects

[CORUS-XUAM](#) (*Concept of Operations for euRopean U-space Services – eXtension for Urban Air Mobility*) – Project Leader

[BUBBLES](#) (*BUilding Basic BLocks for a U-Space SEparation Management Service*)

[DACUS](#) (*Demand and Capacity Optimisation in U-space*)

[ICARUS](#) (*Integrated Common Altitude Reference system for U-space*)

[INVIRCAT](#) (*IFR RPAS Control in Airports and TMA*)

[URCLerED](#) (*Unified Integrated Remain Well Clear Concept in Airspace D-G Class*)

[AURA](#) (*ATM U-Space Interface*)



Horizon 2020 U-space related Research projects

[5D-AeroSafe](#) (*5 services of Drones for increased Airports and waterways Safety and security*)

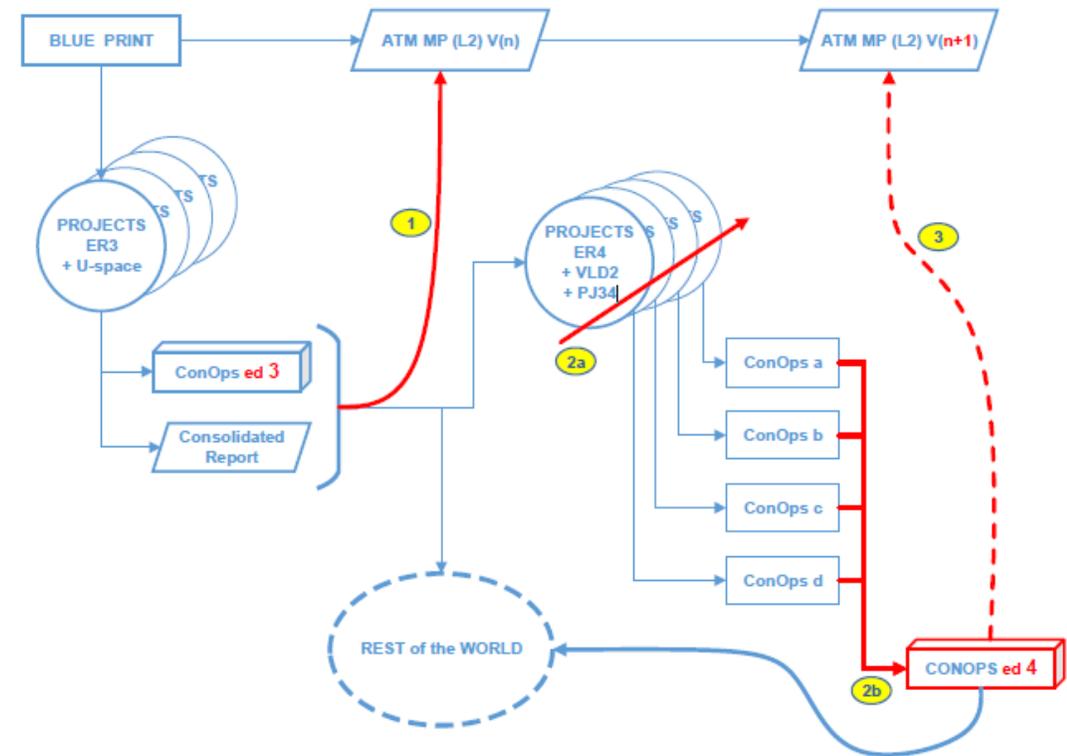
[LABYRINTH](#) (*Unmanned Traffic Management 4d Path Planning Technologies for Drones*)

[Drone4Safety](#) (*Inspection Drones for Ensuring Safety in Transport Infrastructures*)

Consolidation of U-space CONOPS with SJU

EUROCONTROL, in coordination with SJU, is leading the transversal coordination of 17 SESAR and H2020 projects related to U-space/UAM (European U-space ConOps Coordination Cell) with the aim to:

- ✓ Focus the discussion on specific ConOps issues and **accelerate R&D** on U-space
- ✓ Fertilize information sharing among U-space related projects ensuring **consistency of project outcomes**
- ✓ Discuss proposed changes to the ConOps & **foundation package** information
- ✓ Support the projects in their contribution to **accelerate a consistent deployment** of U-space/UAM services at a European level
- ✓ Carry out necessary liaison with **regulation and standardization** bodies (e.g. EASA, EUROCAE, ASTM, ISO) to achieve harmonious outcomes.



Support to Regulations Development



- a. U-space Regulation (2021/664)
- b. Drone regulation (2019/947) and (2019/945)
- c. Ongoing development of Acceptable Means of Compliance and Guidance Material for U-space Regulation :

WP1: Airspace Risk Assessment

WP5: U-space Flight Authorization

WP7: Electronic Conspicuity

WP9: Coordination with local authorities

- d. Mitigate potential risks from unauthorised drones
- e. Promote guidance material



- a. Member of the ICAO RPAS Panel and co-rapporteur of the RPASP WG 2 C2 Link, a datalink which is critical for ATS and ATC data/voice
- b. Member of the ICAO UAS Advisory Group

Support to Standards Development



- a. Counter UAS (C-UAS)
- b. ED-286 OSED for C-UAS in controlled airspace
- c. ED-xxx Interoperability Requirements for C-UAS systems
- d. ED-xxx System Performance Requirements for non-cooperative UAS detection systems



Provide domain expertise in developing a document on “Unauthorized UA incursions at the airport”

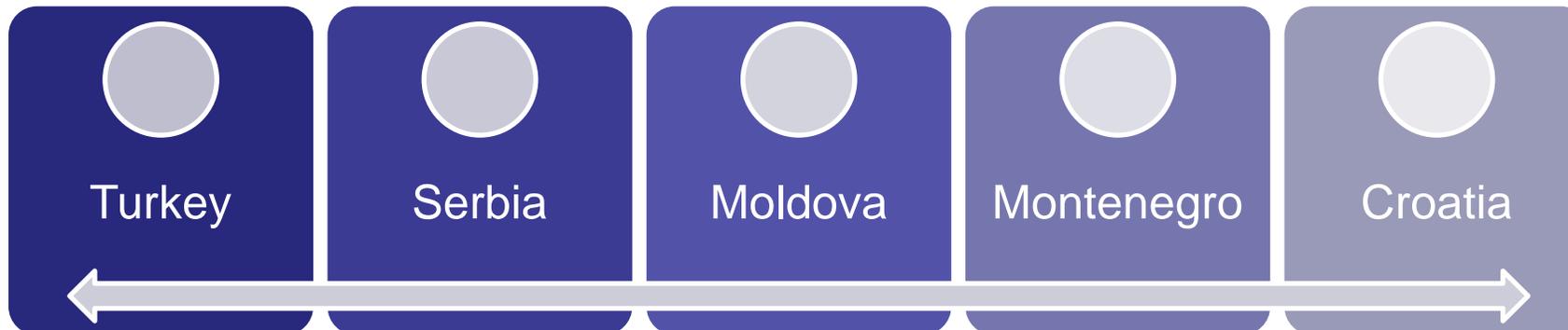
Support to States

- Establish a test corridor between EEC and St Quentin en Yvelines in order to validate scenarios and equipment for the purpose of Paris Olympics
- Conduct airspace assessments



Note: Additional request from 19 States to conduct airspace assessment

- Provide technical guidance to implement U-space regulation



Validation of U-space services in simulated environment at the European Innovation Hub at Bretigny (France)

- Development of a Validation and Simulation Center to enable validation and certification for airspace implementation and deployment.

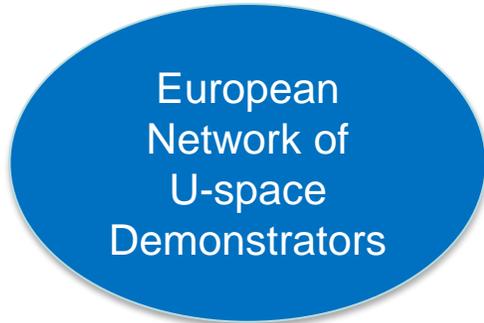


Real/Fast time simulation platform open to all players (UTM Service Provider, CAAs, Researchers, ...)

- Neutral validation against current standards and regulations (airspace assessment)
- Provide simulation capabilities for SESAR and other research / innovation projects
- Interactive showcase that highlights UTM concepts to key stakeholders

Transition from U-space Demonstration to Deployment

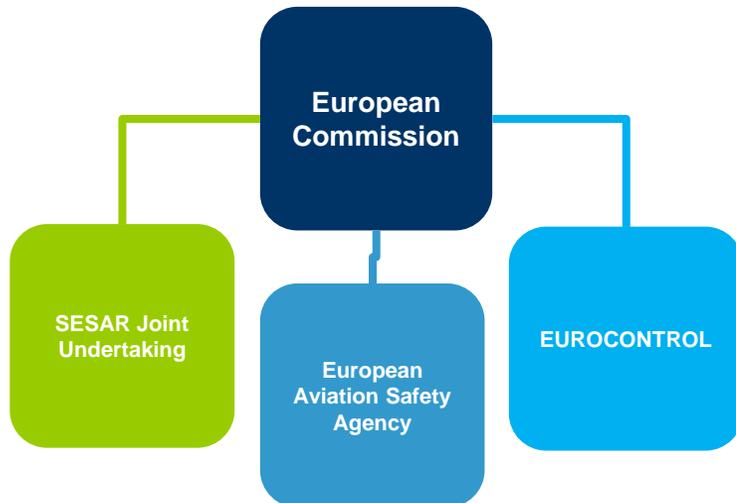
INITIATIVE



OBJECTIVES

- Building on state-of-the-art deployment of BVLOS operations
- Stimulate creation of regulations and standards
- Accelerate lead time to market
- Promote economies of scale
- De-risk implementations
- Reduce red tape

UNIQUE PARTNERSHIP



DELIVERABLES

- U-space status monitoring
- Share lessons learned
- U-space project inventory
- Open discussion forum

**By European Institutions
for European stakeholders**