



# U-space



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Founding Members



# Delivering the U-space Blueprint

- Designed in response to **Warsaw Declaration** and **EU Aviation Strategy**
- Support ongoing work of **European ATM Master Plan update** on safe integration of drones
- **Successful consultation with traditional players & “new entrants” in ATM & aviation** through Working Groups and Workshops
- **Endorsed by the European Commission**  
<https://www.sesarju.eu/u-space-blueprint>



U-space

# Blueprint contents

A common definition of the U-space concept

➔ **Why, What, key services**

A vision expressing the shift towards mobility, connectivity & digital transformation in Transport

➔ **How do drones operate in U-space?**

A roadmap for U-space implementation following a pragmatic stepped approach

➔ **How to ensure a progressive roll out of U-Space?**



U-space

# U-space is...

- A set of **new services** relying on a high level of **digitalisation** and **automation** of functions and specific procedures designed to support safe, efficient and secure access to airspace for **large numbers of drones**.
- An **enabling framework** to facilitate any kind of **routine mission**, from the inspection of infrastructure or the delivery of goods to more complex future applications such as **urban air mobility**.



Source : Airbus

# Preparation of the drone mission

- *e-Registration*
- *Flight planning assistance*
- *Aeronautical information*
- *Meteorological information*
- *Specific drone information*



## Submission of a flight request and reception of an acknowledgement

- *Flight approval*
- *Capacity management*
- *Airspace management*





## Execution of the flight

- *E-Identification*
- *Tracking*
- *Dynamic geofencing*
- *Interface with Air Traffic Control*



## Mission completed

*The drone arrives safely at its destination and delivers the parcel. It is now ready to be prepared for its next mission: a roof survey of a building 500 metres away*





## U1 services provide the foundation

- Pan-European registration
- Pan-European identification
- geo-information to assist compliance with no-fly or restricted zones

## U2 services support the management of drone operations

- Semi dynamic geo-fencing
- Flight approval
- 4D flight trajectory planning and sharing
- Weather information sharing
- Tracking & surveillance
- Drone aeronautical information management.
- Avoidance of non-cooperative ground obstacles;
- Procedural interface with ATC
- Interface with manned aviation
- Recovery and emergency

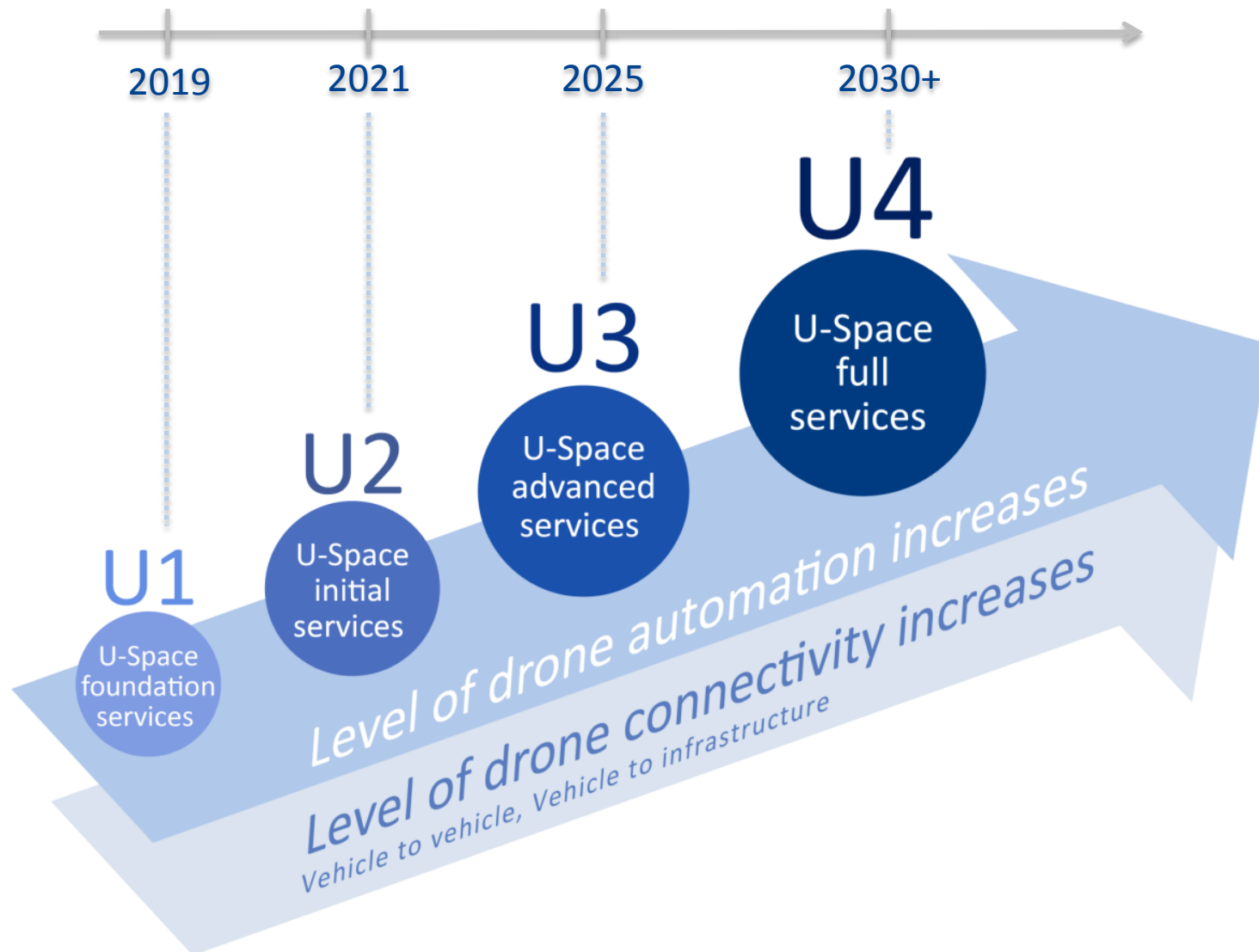
## U3 services support more complex operations in dense areas

- Detect & avoid of cooperative obstacles (drones and other air vehicles)
- Avoidance of non-cooperative ground & air obstacles;
- Dynamic geofencing
- Interface with ATC
- Live Traffic Feed
- Dynamic interface between the U-space and drones (e.g. real-time interface which enables U-space service provider to require drone to re-route or land)

## U4 is the full U-Space

- particularly services offering integrated interfaces with manned aviation, this block will rely on a very high level of automation, connectivity and digitalisation for both the drone and the U-Space system.

# Rolling-out U-space



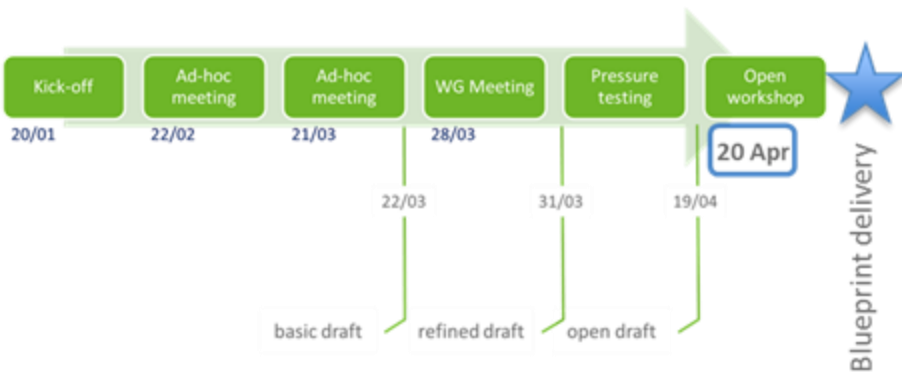
# U-space

Blueprint  
« Fast Track »



Master Plan Update

- Drones in controlled airspace
- U-Space



U-Space  
operational &  
deployment  
roadmap

U-Space benefits,  
investment needs &  
Risk Management plan

8 Nov

21-22 Nov

Digital Transport  
event in TLL,  
incl. MP  
campaign kick-  
off

Helsinki HL  
Conference  
on Drones

1<sup>st</sup> SESAR Projects including CONOPS



# Thank U!

For further questions please contact :

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