Airbus Urban Mobility

Overview and U-Space Approach

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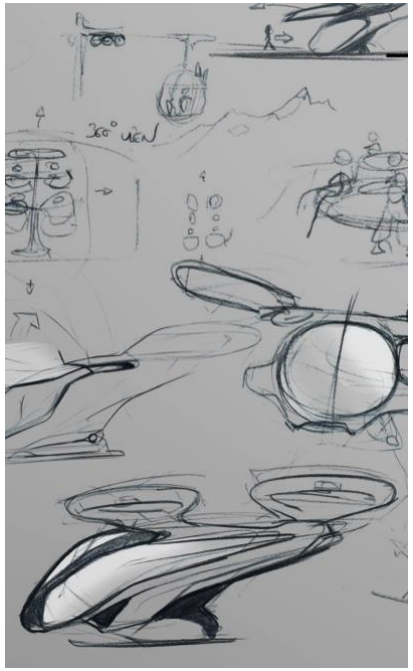
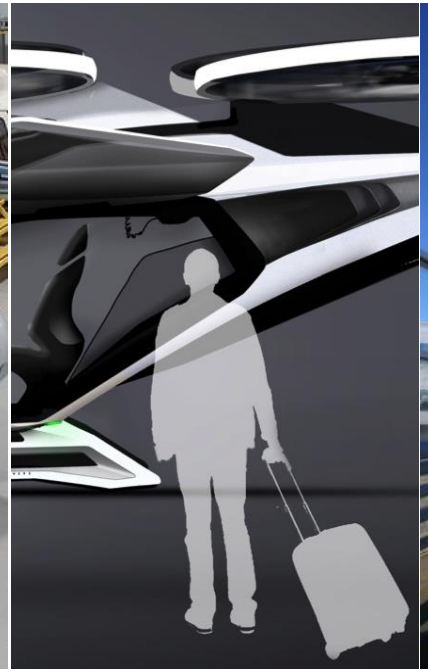
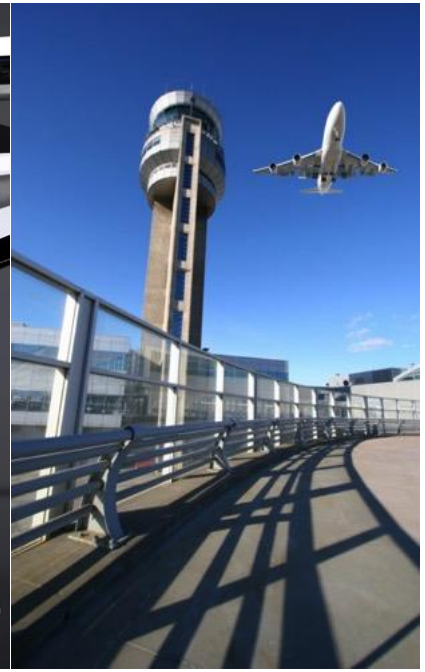
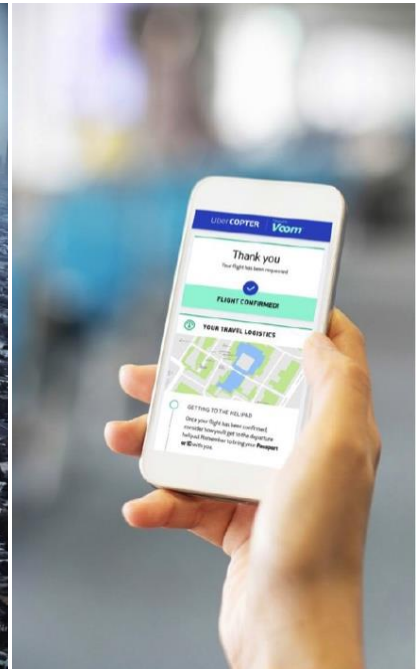
EASA European Union Aviation Safety Agency
EU-SOUTH ASIA APP
EUROPEAN UNION
AIRBUS

URBAN AIR MOBILITY VISION:

At Airbus Urban Mobility, we better connect people by bringing the safety, convenience, and joy of flight to city inhabitants.

Urban Air Mobility is more than just a vehicle… it's about the value chain!

Urban Aircraft	Support & Service	Flight Operations	Air Traffic Management	Ground Infrastructure	Passenger Solution
					
Design, Development and Production	**Maintenance, Repair, Overhaul Spare parts**	**Operation of the Urban VTOL Acquisition or leasing of VTOL**	**Develop and operate ATM solution for Urban VTOL**	**Installation and maintenance of VTOL pads**	**Booking application for flight trips**

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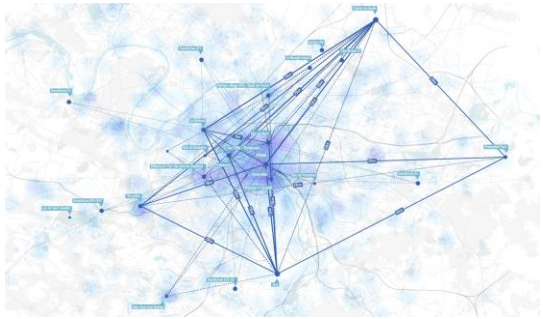
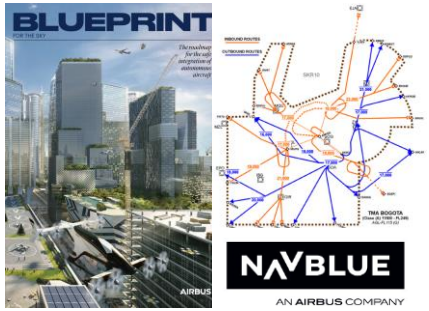
Airbus UAM's existing capabilities

Airbus UAM

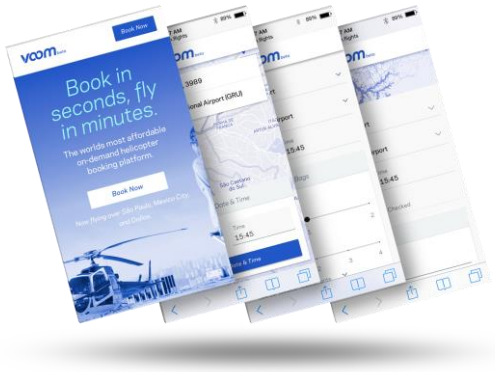


City mobility planning and simulation

UAM infrastructure catalogue and solutions



Airspace design & analysis consultancy, and ATM-UTM services with NavBlue



Voom B2C platform or full operation

Airbus existing vehicles (Helicopters)

Airbus future vehicles (eVTOLs)

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PARTNERING WITH CITIES – PARIS

Airbus announced the conduct of feasibility study for the demonstration of an urban system of VTOLs for the Paris 2024 Olympics

© Airbus 2019 / Artist impression by MVRDV

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Vahana demonstrator

Vahana is an all-electric, single-seater, tilt-wing vehicle demonstrator that focuses on advancing self-piloted, electric vertical take-off and landing (eVTOL) flight.

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CityAirbus demonstrator

CityAirbus is an all-electric, four-seater, multicopter vehicle demonstrator that focuses on advancing remotely piloted electric vertical take-off and landing (eVTOL) flight.

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Skyways

Skyways is a system of systems, with an aerospace-grade drone, operating BVLOS in urban environments; Drone-parcel delivery and shore-to-ship demonstration trials have been completed.

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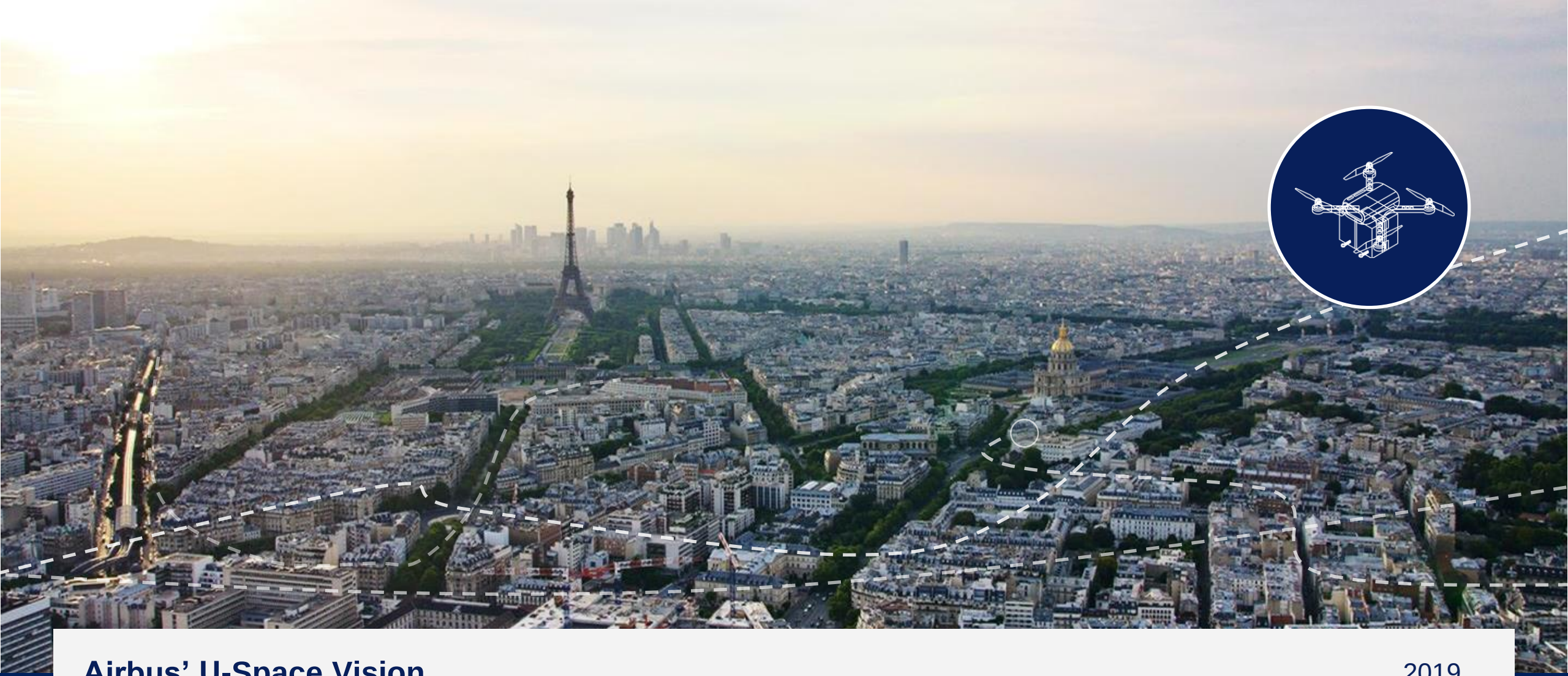

Airbus' U-Space Vision

2019

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Paris in 2035

Airbus Blueprint

	2035
80 Commercial Aircraft	156
0 UAM	2,500
0 Delivery Drones	16,500
1 Inspection Drones	58
12 Hobby Drones	44

flights per hour

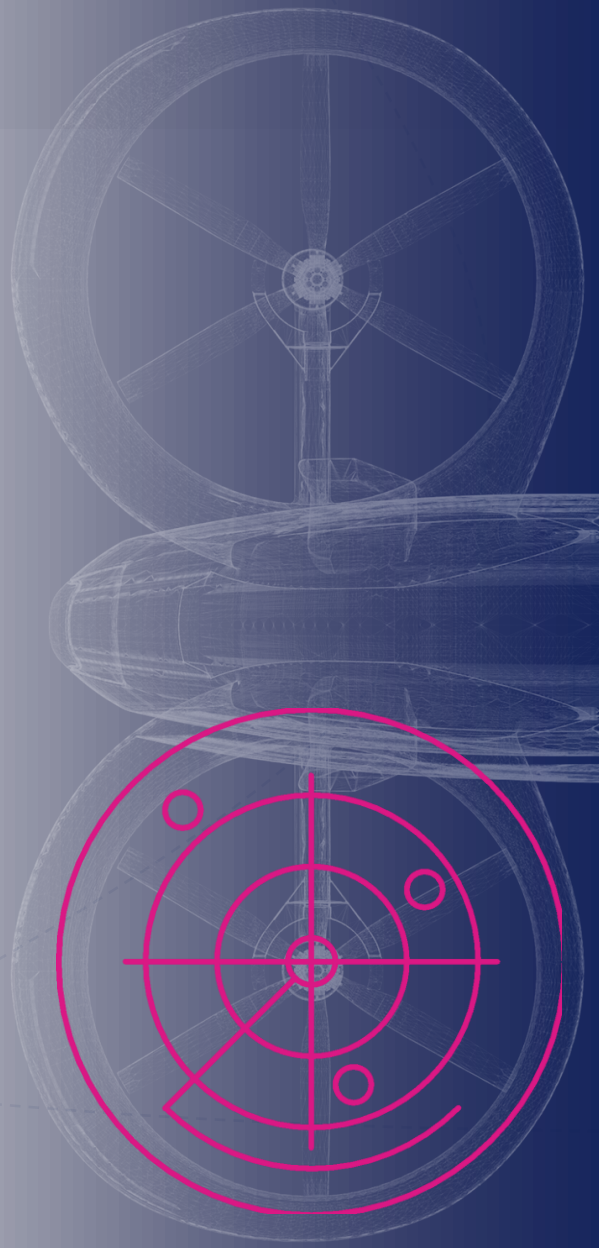
Airbus has established a dedicated U-Space team because:

U-Space is the enabler for smarter, more capable aircraft operations

- Enhanced computing power and machine learning will enable better utilization of data
- Allowing for real-time safety monitoring and risk assessment
- Optimization of the potential of our aircraft - traffic management must also be fit for purpose

U-Space will change the way airspace can be managed

- Reducing congestion and increasing efficiency
- Enabling dense and urban operations
- Ensuring a connected, smart system with relevant stakeholders in the loop
- Allowing for real-time safety monitoring and risk assessment
- UTM – ATM convergence
- Transferable CONOPs to manned aviation and air traffic



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Our Vision

To design, specify, build, and deploy digital air traffic services that support the autonomous and digital operations of Airbus and aviation stakeholders globally.

U-Space and U-Space Services Support a Range of Aircraft

HIGH ALTITUDE
Weather, traffic management, deconfliction

COMMERCIAL AIRCRAFT
Traffic management, deconfliction, weather

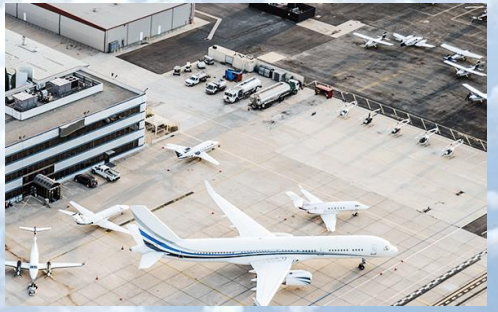
HELICOPTERS
Weather, scheduling & metering

UAM
Automated flight approval, weather, metering, Traffic Management

DELIVERIES
Automated flight approval, weather, metering,
Traffic Management, Safety Management System

IMAGING AND ANALYTICS
Automated flight approval, weather, SMS pilot briefing

HOBBY DRONES
Automated flight approval, SMS pilot briefing



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Who We Work With

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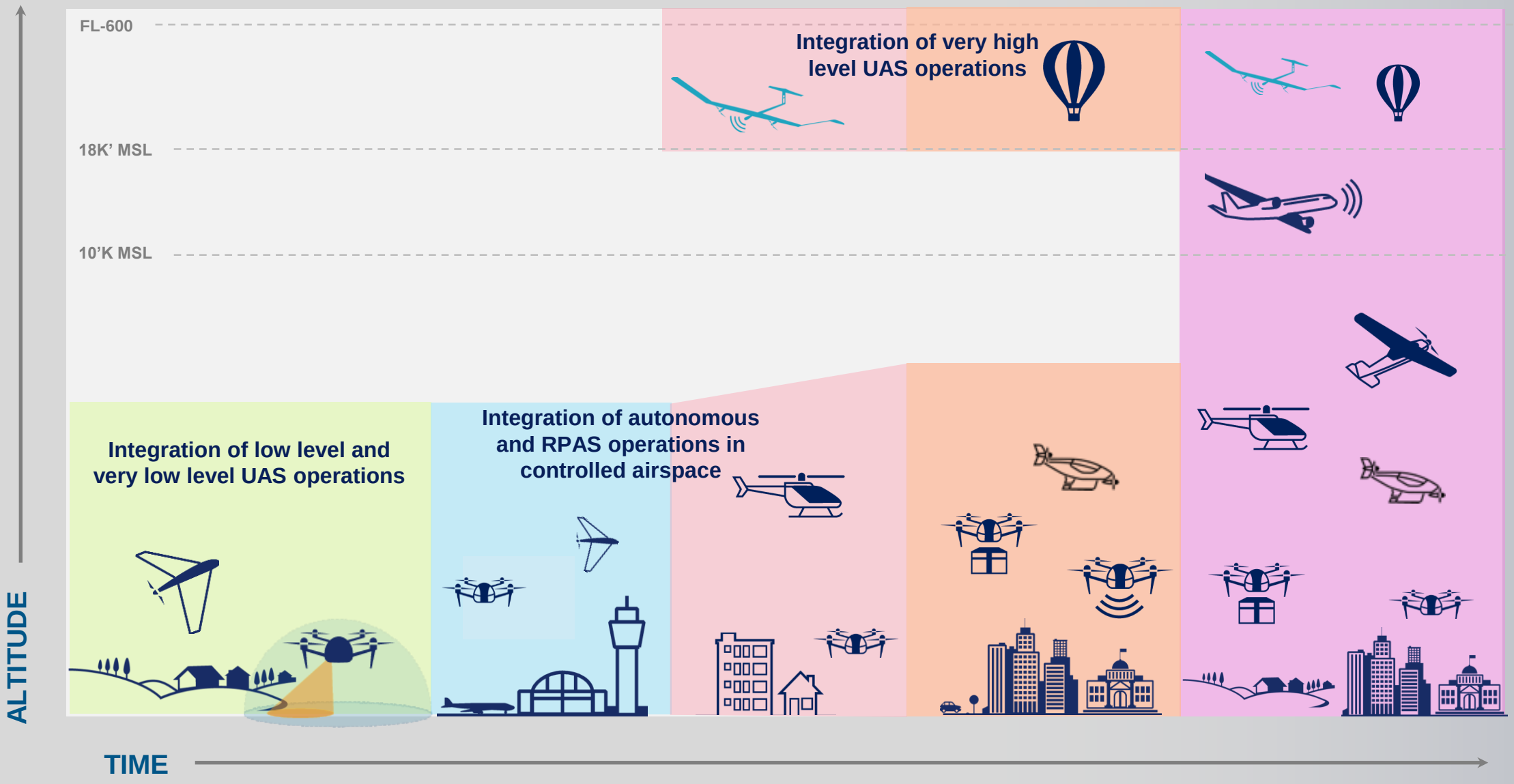
A step by step approach to a fully integrated sky



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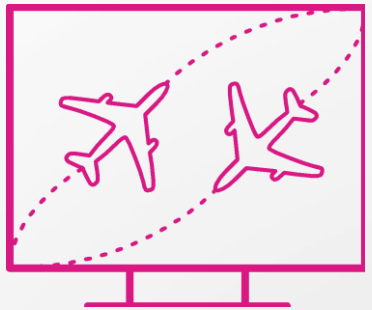
U-Space Deployment Timeline

1. Airspace Information & Advisories (U1, U2)

- Aeronautical information
- Weather service
- Terrain and obstacle service
- Preflight risk assessment
- Surveillance / Tracking / e - Identification
- Interface with ATC
- Geoawareness, registration

2. Fleet Management & System Manager (U3+)

- Fleet operations
- Scheduling and metering
- Dense airspace management
- System Management
- Automated flight plan approval
- Inflight rerouting



3. Safety of Life certified services (U4+)

- Traffic Management
- Emergency Airspace Management
- Personnel Transport

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UTM Successes: Blueprint, LAANC, Quantified Risk Service (+ SORA)

UTMBlueprint.com

Read in over **87 countries** and **presented internationally** and to **ICAO**, Airbus is paving the path for **UTM**.

LAANC CONNECTED

Airbus was approved by the FAA as a UAS Service Supplier for Low Altitude Authorization and Notification Capability (LAANC).

Quantifying the risk during all parts of flight, Airbus has developed the QRS to ensure the safety of our future skies inclusive of SORA

DroneDeploy

DroneDeploy is now a commercial customer of Airbus UTM services. DroneDeploy is the largest commercial drone operator in the United States and the largest mapping application used by DJI customers.

Example Use Case:

Airbus Aerial – Changing the Way the World Uses Aerial Data

1. FAA UTM Provider

2. Safety Management System
SORA Risk Assessment

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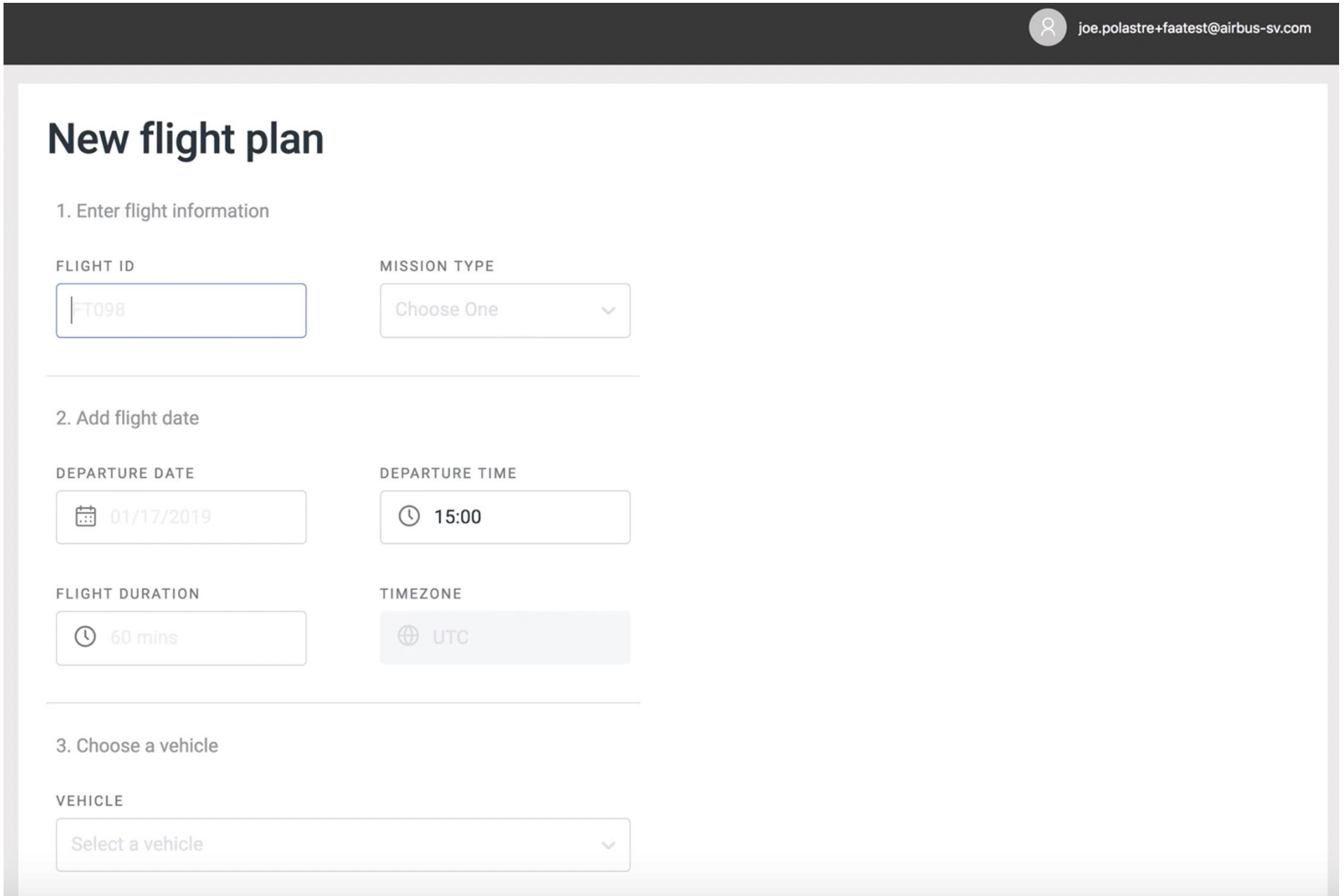
Real World Applications – Automated Flight Authorization – LAANC



Real World Applications – Automated SORA Risk Assessment

SORA Evaluation Tool

VEHICLE

Please select a vehicle

LINE OF SIGHT

- (•) VLOS
- ( ) BVLOS

PREFLIGHT CHECK

[ ]

OPERATION IN AN AREA WITH CONTROLLED ACCESS FOR BYSTANDERS

[ ]

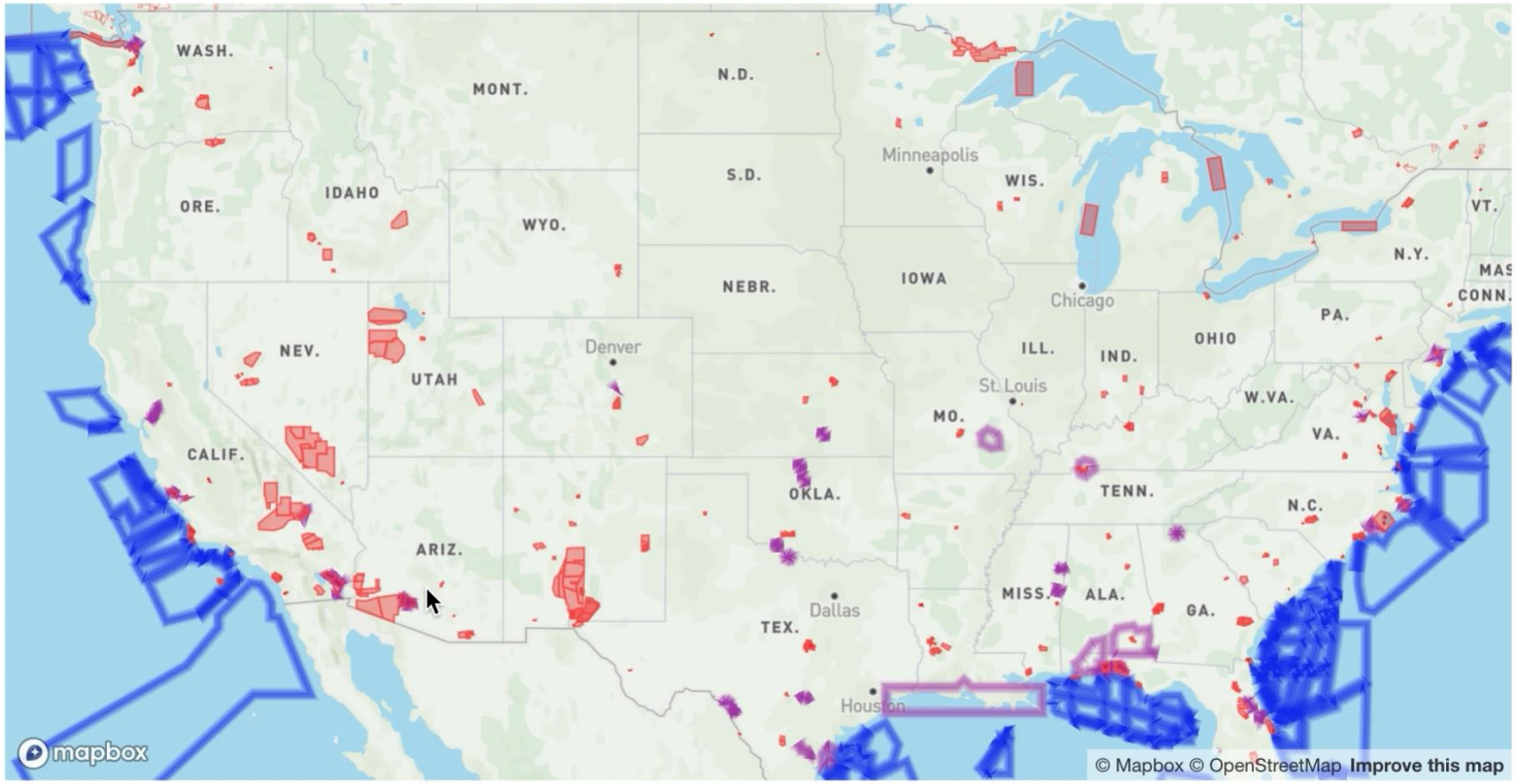
EMERGENCY RESPONSE PLAN

Please select a plan

FLIGHT PATH

Choose File No file chosen

SUBMIT



Thank you

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