



Airbus Autonomy in Aerospace – Skyways Project

IACD2018, Technology Advancement for the Future
of Air Cargo Transport

HELICOPTERS

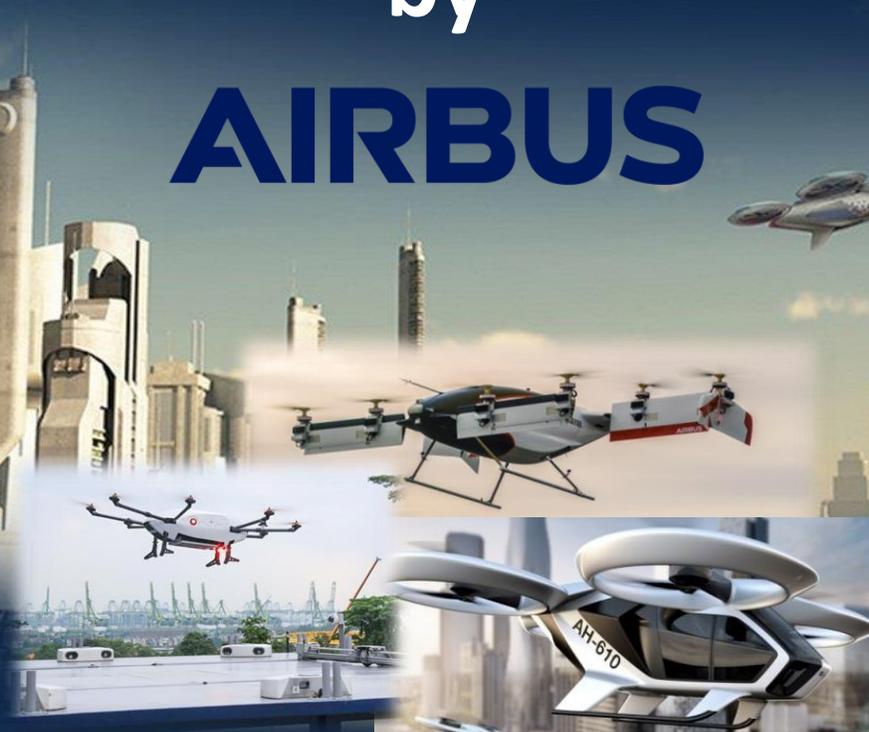
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AIRBUS

Autonomy by **AIRBUS**



**Unmanned Aircraft System Services
(Surveillance, Connectivity and Analytics)**



Urban Air Mobility



Pilotless Air Transport

AIRBUS



S K Y W A Y S
THE FUTURE OF URBAN AIR DELIVERY

Innovative Unmanned Air System (UAS) for Urban Last-Mile Delivery

- » **Embodying Aviation Standards for Public Safety**
Advanced air and ground systems designed and maintained to aviation safety and security standards
- » **Full Autonomy**
Self-navigation and automatic cargo handling systems
- » **Enabling future Urban Air Mobility**
Setting regulatory and operational requirements standards for autonomous air vehicles in our future cities

Project Skyways – System Overview

Urban Unmanned Aircraft:

- Fully electric Octocopter UAV, STANG4702 / CS-LURS compliance demonstrated.
- Payload capability of 2kg to 4kg.
- MTOW 25 to 30kg.
- Max range 5 km with non-GNSS precision take-off and landing capability



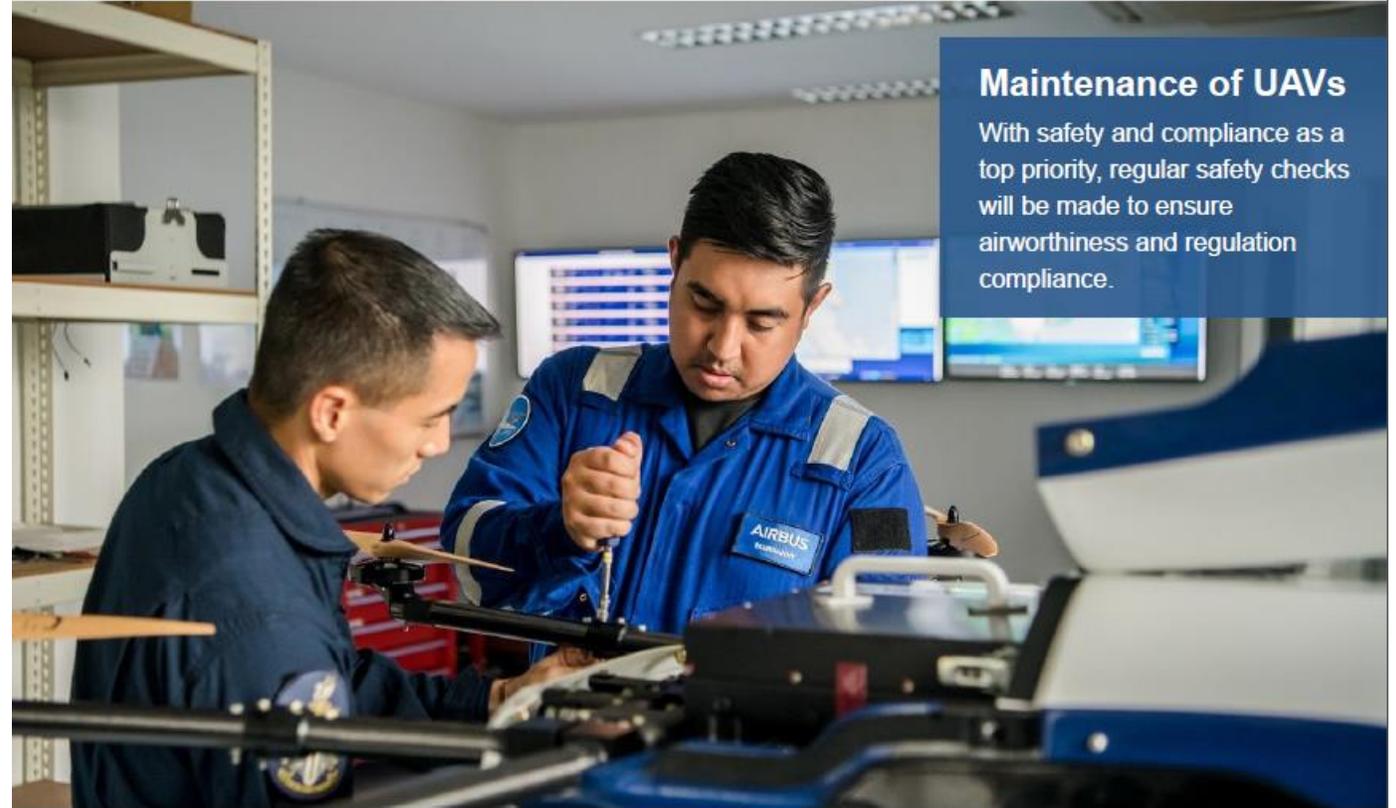
Project Skyways – System Overview

- **UA Control Systems (UCS):** Ground Operations Center for UA health /operations monitoring, and basic Unmanned Traffic Management
- **UA Flight Operations:** No remote pilots required (only for maintenance). Operations are monitored by “System Operators” from the UCS. System Operators only provide Take-off, Hold, Land Immediately, and Route Clearance commands.



Project Skyways – System Overview

- **UA Maintenance Systems:** Aviation standard maintenance procedures and technical logs.



Maintenance of UAVs

With safety and compliance as a top priority, regular safety checks will be made to ensure airworthiness and regulation compliance.

Project Skyways – System Overview



- **Automatic Ground Cargo Handling Systems (Optional):** Optional ‘Parcel Station’ for automatic loading and unloading, and storing of parcels.
- **Integration with Logistics Services:** Integrated Singapore Post delivery system front-end.

Project Skyways – Moving Forward



FEBRUARY 2016

- Signature of MoU between Airbus & CAAS



2017



APRIL 2017

- MoU between Airbus and SingPost



2018



FEBRUARY 2018

- Initial Flight Demonstration



JUNE 2018

- MOU between Airbus and Wilhelmsen Ship Services



Design, Production, & Testing in the National University of Singapore Campus



- Project Agreement with CAAS and EASA

JUNE 2018

NUS service Trials in Singapore (Sept 2018)

Shore-to-Ship Pilot Trial (Oct 2018)

Project Skyways – Videos

Feb 2018, Initial Flight Demo



Thank you