A EUROPEAN DEFENCE AGENCY PROJECT

RPS CORE LAYER STANDARDISATION

Development of the RPS Minimum Operational Performance Standards (MOPS) covering the RPS Core Layer elements

2022

https://rps-core.eu

PROJECT DESCRIPTION

The project aims at ensuring the availability of **standards** to enable the **safe integration of unmanned aircraft into the European Air Traffic Management (ATM) system.**

It is focused on the production of **MOPS** covering all **RPS essential elements to operate the RPA.** This standardisation activity is being built upon previous projects, specifications, and standards in both the Air Traffic Integration and Airworthiness domains, including but not limited to previous activities at EDA.

The standardisation of technical enablers to airspace integration significantly facilitates the regulation in both civil and military domain so that **Industry standards** from a recognized body, such as **EUROCAE**, can be **easily translated to Acceptable Means of Compliance (AMC)** by civil or military aviation authorities.

The project, which is divided in three phases, was awarded to an **industrial consortium** composed by **Airbus Defence and Space** (ES), **GMV** (PT) and **Alter Technology** (ES).

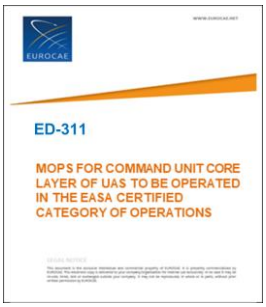
PHASE 1

Phase 1 **produced and validated a draft MOPS of the RPS Core Layer** to be used as input to start standardisation activities at EUROCAE.

- Generation of a **generic MALE RPAS RPS** architecture with the identification of the Core Layer elements as per ICAO definition.
- Assessment and consolidation of existing **Airworthiness and Air Traffic Integration requirements.**
- Development of the required preliminary **technical content for the MOPS.**
- **Preliminary Validation** of MOPS requirements.

PHASE 2

Phase 2 was focused on **supporting standardisation** activities to evolve the Preliminary draft MOPS developed in Phase 1 up to Open Consultation.



RPS or CU (command unit) Core Layer main functions are to manage:

- Flight
- Detect and avoid
- C2 link
- RPA systems
- CNS/ATM communications
- Flight plan
- General functions

Phase 2 ACTIVITIES

- Lead the **EUROCAE WG-105 activities to evolve the Preliminary MOPS** up to Open Consultation.
  - set up the standardisation group with industry members
  - organise group meetings and needed reviews
  - lead the MOPS drafting and support the internal reviews up to the MOPS publication for Open Consultation.
- Carry out a **simulation-based test campaign** to validate MOPS requirements
  - The aim is to ensure that a RPS/CU compliant with these requirements can conduct safe operations in controlled airspace in accordance with existing regulation and procedures.
  - Validation is based on the execution of scenarios with RPs and ATCOs in a simulation environment.
- **Dissemination activities** (project's webpage, validation campaign video, Open Day)

Phase 2 CONCLUSION

- Draft ED-311 **" MOPS for Command Unit Core Layer of UAS to be operated in the EASA certified category of operations "** is ready to start Open Consultation process for further MOPS publication at EUROCAE.

EXPECTED BENEFITS

- For **EU nations** this project aims at developing industry standards to be used as **AMC** for the future **RPAS regulation in the civil and military domains** and will focus on **MALE-type RPAS**.
- For **European industry** the project will ensure the development of a **European standard for RPS** and will increase the **know-how** with new **standardisation activities**.
- For **standardisation bodies**, in particular **EUROCAE**, this project will **complement the current activities** on **Remote Pilot Stations**.
- For **regulatory bodies**, this project will **inform** the **regulators** about the **current technical possibilities** and **potential Acceptable Means of Compliance** in the **RPS domain**.

Standardisation is a key enabler for the Remote Pilot Stations certification

THIS PROJECT WILL PAVE THE WAY FOR FUTURE MILITARY RPAS OPERATIONS, ENSURING A SAFER AIRSPACE FOR ALL EUROPEAN CITIZENS

CONSORTIUM

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