



5 services of Drones for increased airports and waterways safety and security

D8.8 PROJECT VIDEOS 1

Document Summary Information

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Project Summary

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Work programme topic: MG-2-8-2019 - Innovative applications of drones for ensuring safety in transport

Grant Agreement n. 861635

Coordinating person: Philippe Chrobocinski, Airbus Defence and Space (ADS)

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Requested grant: € 3 497 475

Participant No.	Participant Organisation Name	Short	Type	Country
1(coord.)	Airbus Defence & Space	ADS	IND	FR
2	Future Intelligence Ltd.	FINT	SME	EL
3	Ecole Nationale de l'Aviation Civile	ENAC	RTO	FR
4	Air Force Institute of Technology	ITWL	RTO	PL
5	Vicomtech	VICOM	RTO	ES
6	Hellenic Mediterranean University	HMU	ACAD	EL
7	Ferrovial Corporacion SA	FERRO	USER	ES
8	Greek Water Airports	GWA	SME/USER	EL
9	AirMap Deutschland GmbH	AIRMAP	SME	DE
10	Eurocontrol	EUROC	USER	BE

Executive Summary

During the project's lifecycle several promotional, educational, and instructive videos will be produced. These videos will be used, not just for the dissemination of the project, but also as informative videos for partners and other stakeholders. The scope of this deliverable is to report the existing videos and the purpose for which they were produced. Additionally, this document will show case the communication channels, through which these videos have been disseminated.

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Glossary of terms and abbreviations used

Abbreviation / Term	Description
UAV	Unmanned Aerial Vehicle
Nav aids	Navigation Aids
GGCS	General Ground Control Station

1 Introduction to 5D-AeroSafe videos

This deliverable presents a variety of videos currently uploaded in dissemination channels (YouTube) by work package 8 (WP8) dissemination leader. Furthermore, it provides a short description for each video along with some screenshots. Moreover, it holds the first pilot video link and a short description about the simulated drone inspections performed during the 1st Pilot of 5D-AeroSafe.

2 5D-AeroSafe Videos

2.1 Project and Consortium overview

2.1.1 Description

The Project and Consortium video starts with the project coordinator Philippe Chrobocinski (Figure 1) from Airbus France and the project scientific and technical manager Effie Makri (Figure 2) from FINT, who briefly present the project's envisioned scope and objectives. Next, a quick presentation of other partners and the current status of the project – during month 14 – is performed, and finally, some future plans were presented, the 5D-AeroSafe scenarios and some photos from the first Physical KO Meeting as shown in Figure 3 and Figure 4.

2.1.2 Links:

- YouTube: [YouTube URL](#)
- Facebook: [Facebook URL](#)
- Twitter: N/A

2.1.3 Screenshots

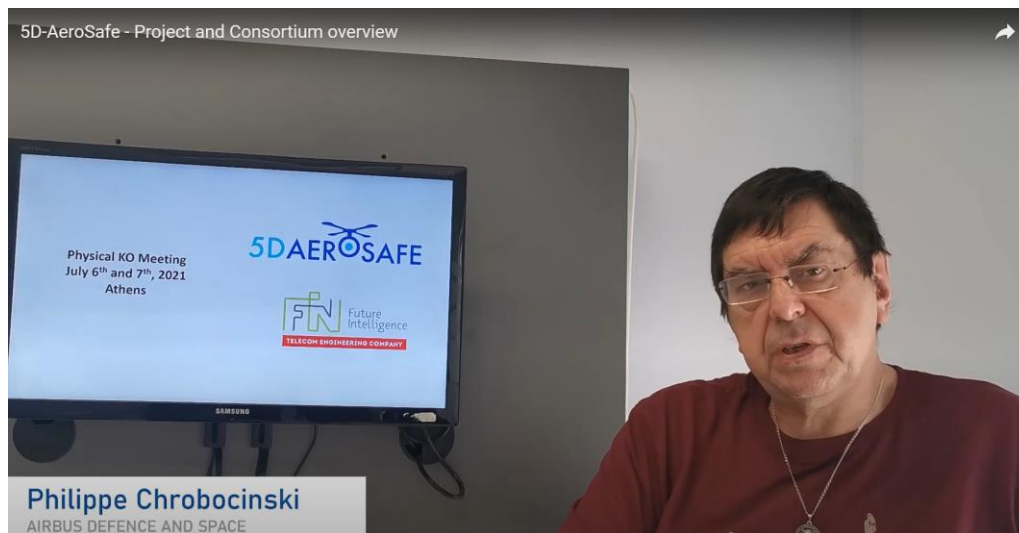


Figure 1 Project Coordinator

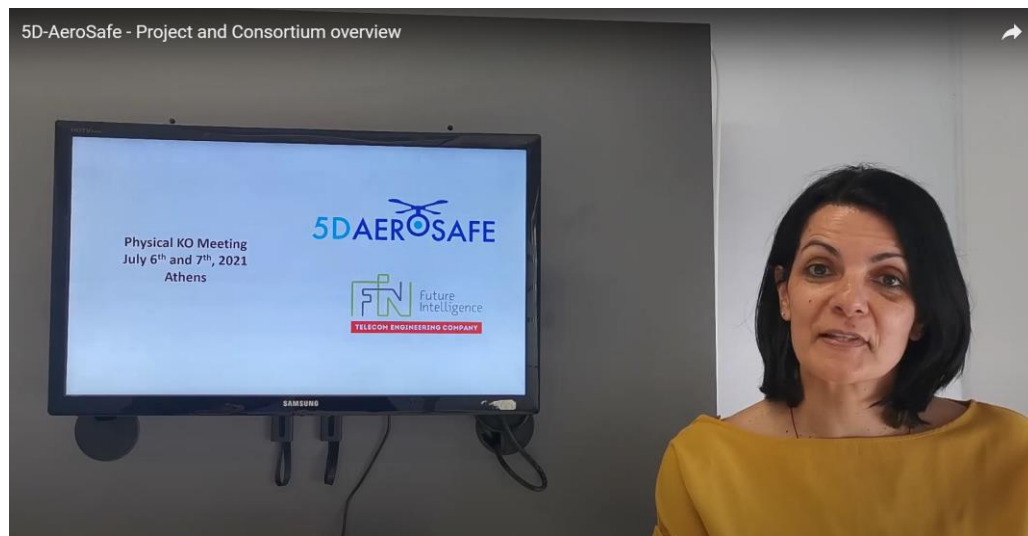


Figure 2 Scientific and Technical Manager



Figure 3 Physical KO Meeting in Athens



Figure 4 Physical KO Meeting Attendees

2.2 Project Coordinator - Presentation of 5D-AeroSafe

2.2.1 Description

The project's coordinator presentation starts (Figure 5) with some facts about 5D-AeroSafe and a short presentation of consortium partners, as shown in Figure 6. Following, the project coordinator presents the project's motivation, the scope of 5D-AeroSafe, and the main concept that will be developed during the project's time-frame, as depicted in Figure 7 and Figure 8. Finally, the project coordinator concludes with the project's challenges and the ultimate results expected by the end of the project, as shown in Figure 9. Additionally, he presents some technical challenges and the operational scenarios, yet to be implemented.

2.2.2 Links:

- YouTube: [YouTube URL](#)
- Facebook: [Facebook Post URL](#)
- Twitter: N/A

2.2.3 Screenshots



Figure 5 Video Introduction



Figure 6 5D-AeroSafe Consortium presentation

Project Coordinator - presentation of 5D-AeroSafe

5DAEROSAFE

Project scope

The main scope of 5D-AeroSafe is to develop a **solution for the safe and efficient integration of UAS in airport and waterway daily operations**, that will:

- **Conduct Flight Inspections**, i.e. inspections and calibrations on CNS (Communication, Navigation and Surveillance) systems and landing visual aids,
- **Safeguard airport restricted areas**,
- **Inspect runways and taxiways** (and water runways) to detect Foreign Object debris or any other threat to aircraft movement on the ground (and water surface).

This concept will allow the smooth operation and integration of UAS in Aerodrome ATM (Air Traffic Management) systems via the co-operation with UTM (Unmanned Aircraft System Traffic Management) Systems, enhancing mutual situation awareness.

Figure 7 The project's scope

Project Coordinator - presentation of 5D-AeroSafe

5DAEROSAFE

Main concept of 5D-AeroSafe

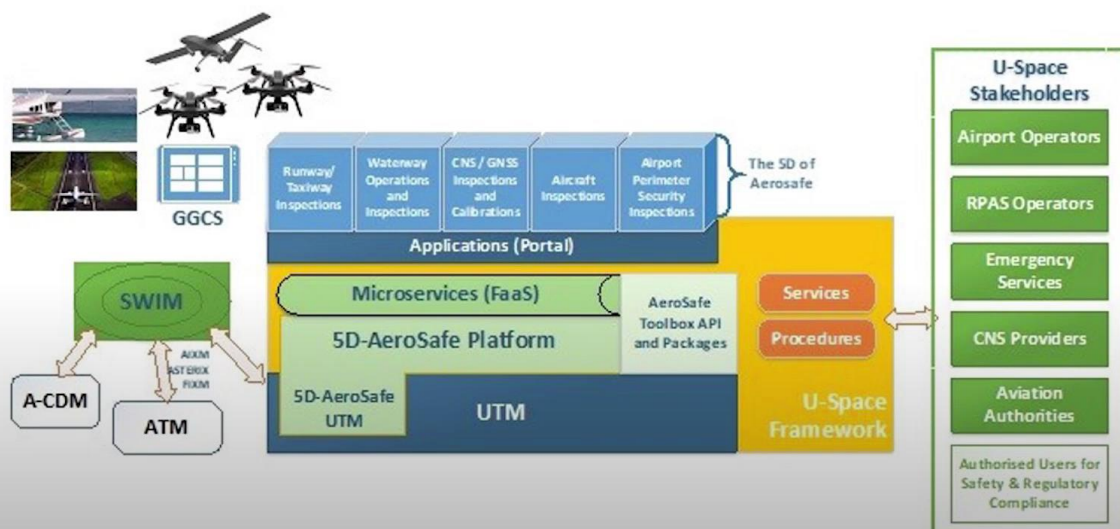



Figure 8 Main concept of 5D-AeroSafe

Project Coordinator - presentation of 5D-AeroSafe

5DAEROSAFE

Ultimate result



Platform built as part of the established UTM

Conforming to the applicable regulations, and the services and procedures described in the U-Space framework as well requirements of the involved shareholders, 5D-AeroSafe, based on the development of appropriate functions, will provide an application portal as well as a toolbox with APIs and packages ready to supply the “5-Dimensions” of 5D-AeroSafe.

Figure 9 Expected Results

2.3 5D-AeroSafe Presentation

2.3.1 Description

The 5D-AeroSafe presentation video depicts all various aspects of 5D-AeroSafe project, starting with a presentation from Ms. Effie Makri who is the project Scientific and Technical Manager, as shown in Figure 10.

Ms. Effie Makri presents the objectives of this project (Figure 11), the 5 Dimensions e.g., Waterway operations and inspections, CNS and GNSS inspections and calibration, Security checks / patrolling, etc. Moreover, the presentation depicts the overall structure and work plan of this project (Figure 12) and the 5 phases (Figure 13) it follows. The 5 phases are (1) Planning & Management, (2) CONOPS, (3) Development & Testing, (4) Demonstration & Validation and (5) Dissemination, Communication, Exploit and Innovation. Finally, the presenter showcases the various consortium roles and all partners of the consortium (Figure 14).

2.3.2 Links:

- YouTube: [YouTube URL](#)
- Facebook: [Facebook Post URL](#)
- Twitter: N/A

2.3.3 Screenshots



Figure 10 Fact Sheet

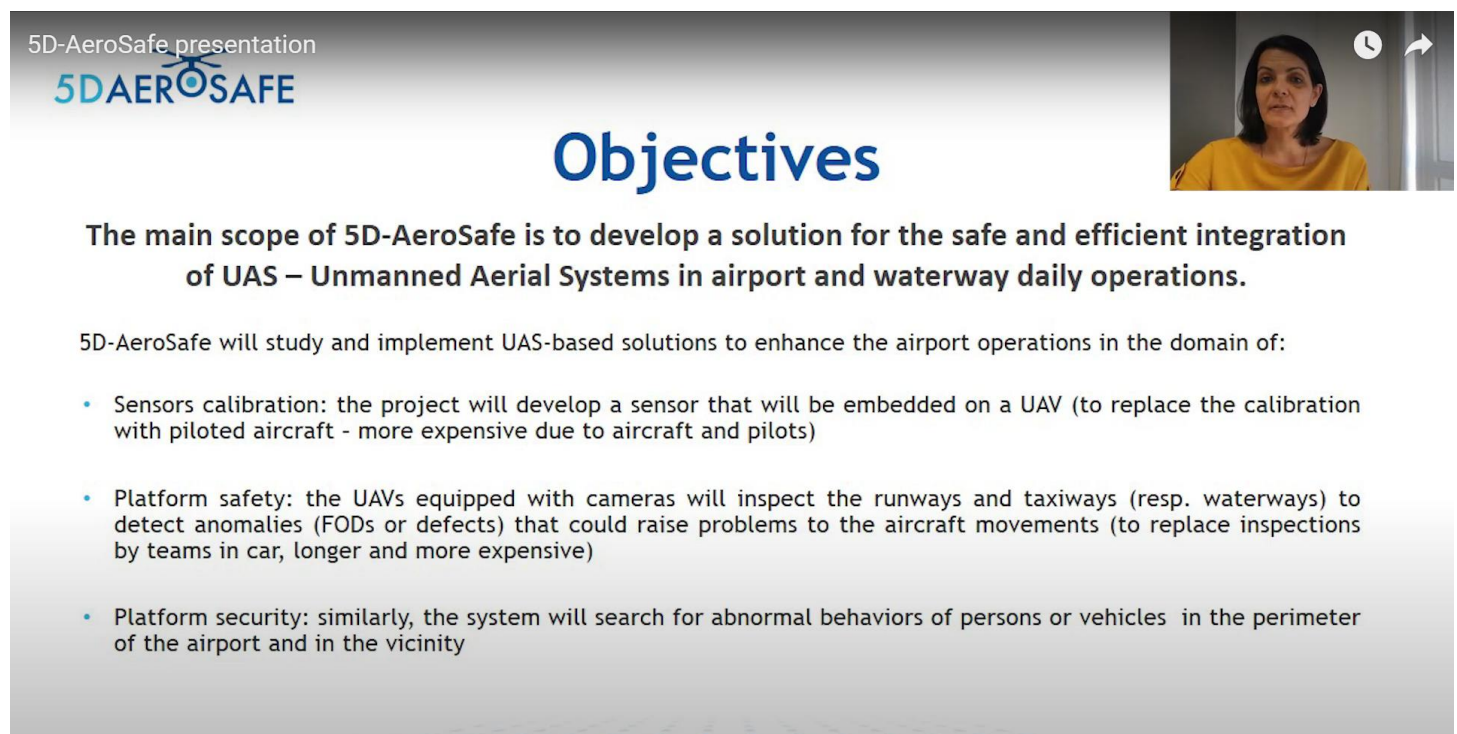


Figure 11 Objectives

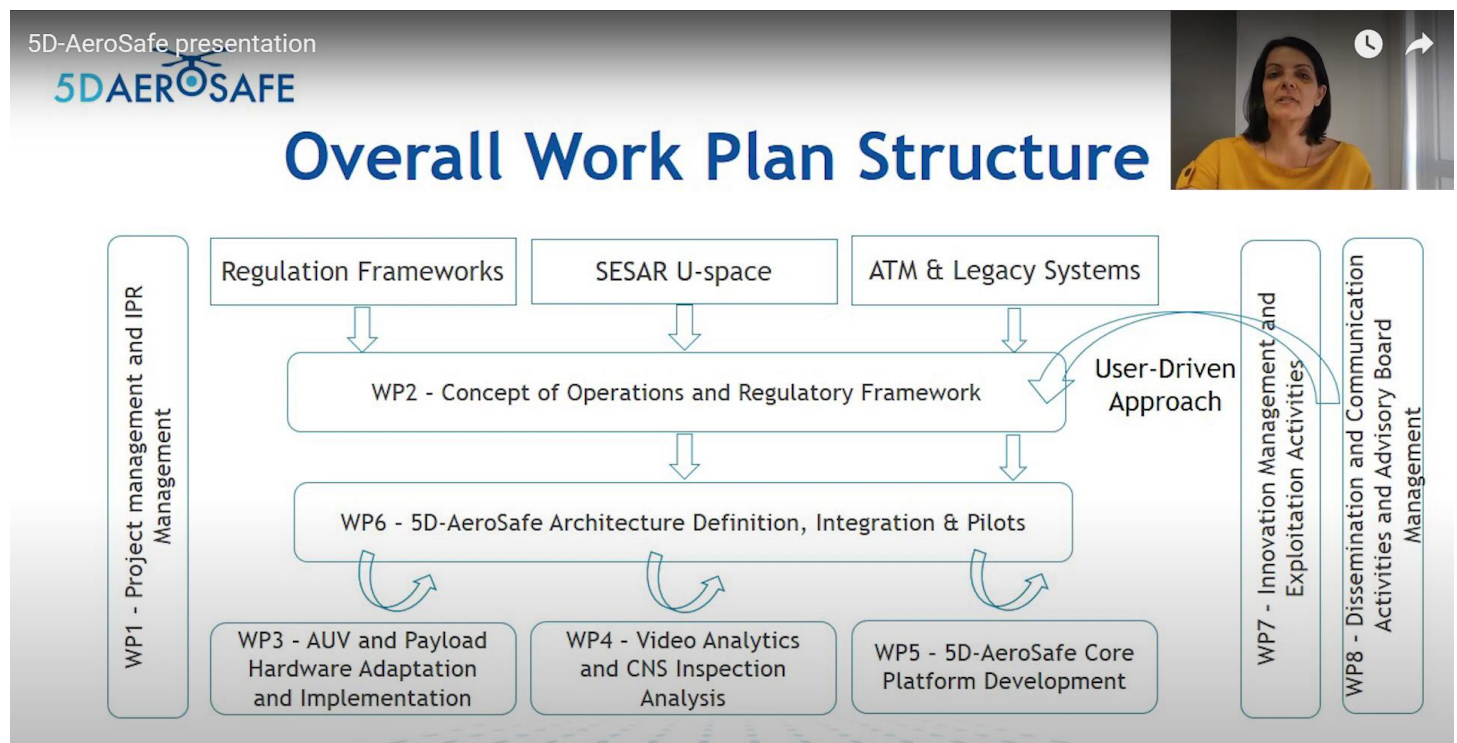


Figure 12 Overall Work Plan

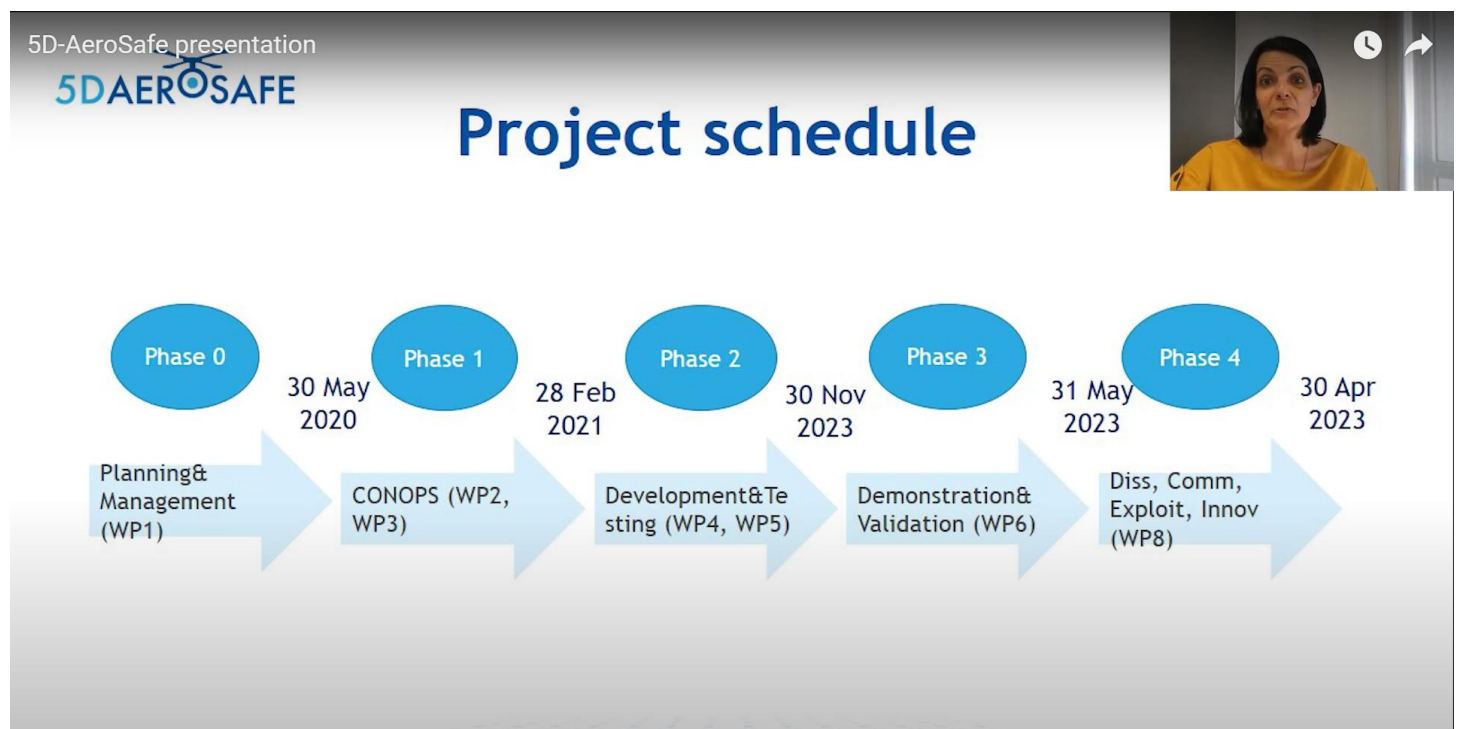


Figure 13 Project Phases

5D-AeroSafe presentation

5DAEROSAFE

Consortium roles

Large Industry	Airbus Defence & Space, FERROVIAL
Academia, Research	HMU, ITWL, ENAC, VICOMTECH
SMEs	FINT, AIRMAP, Greek Water Airports
End-Users	FERROVIAL, Greek Water Airports, EUROCONTROL

3 SME partners, that contribute significant ‘know-how’ for the provision of UTM systems, expertise in development of transceivers, and water airport operations.
4 Academic and Research partners, offering their skills in UAV integration and testing, visual analytics and AI algorithms, as well as information and communication technologies.
2 large industrial players offering their expertise in RPAS systems, systems integration and airport/transport infrastructure management. Finally,
3 End User offer their valuable expertise in guidance the project to offer a solution close the needs of the user.




Figure 14 Consortium Roles

2.4 5D-AeroSafe Teaser

2.4.1 Description

This video is uploaded as an initial teaser trailer video of YouTube Channel. It lasts only 15 seconds, and it displays the 5D-AeroSafe Logo as shown in Figure 15.

2.4.2 Links:

- YouTube: [YouTube URL](#)
- Facebook: N/A
- Twitter: [Twitter Post URL](#)

2.4.3 Screenshots



Figure 15 5D-AeroSafe Logo

3 Pilot Videos

In this section we present the videos that were produced during the project pilots. They contain both managerial and tactical information on how the project progresses and how the project envisions to implement its goals.

3.1 1st Pilot Video

3.1.1 Description

This video showcases three main screen recordings, taken during the 1st Pilot of 5D-AeroSafe. Starting with the taxiway inspection, the first part of this video showcases the potentials and the speed of performing taxiway inspections with drones. In the second part of this video, the waterway inspection is performed by two drones simultaneously, with exceptional results. Finally, in the last part of this video, the NavAids inspection and calibration is performed by two drones, starting from two different and opposite positions, from the antenna.

3.1.2 Links:

- YouTube: [YouTube URL](#)
- Facebook: [Facebook URL](#)
- Twitter: N/A

3.1.3 Screenshots



Figure 16 Taxiway Inspection



Figure 17 Waterway inspection

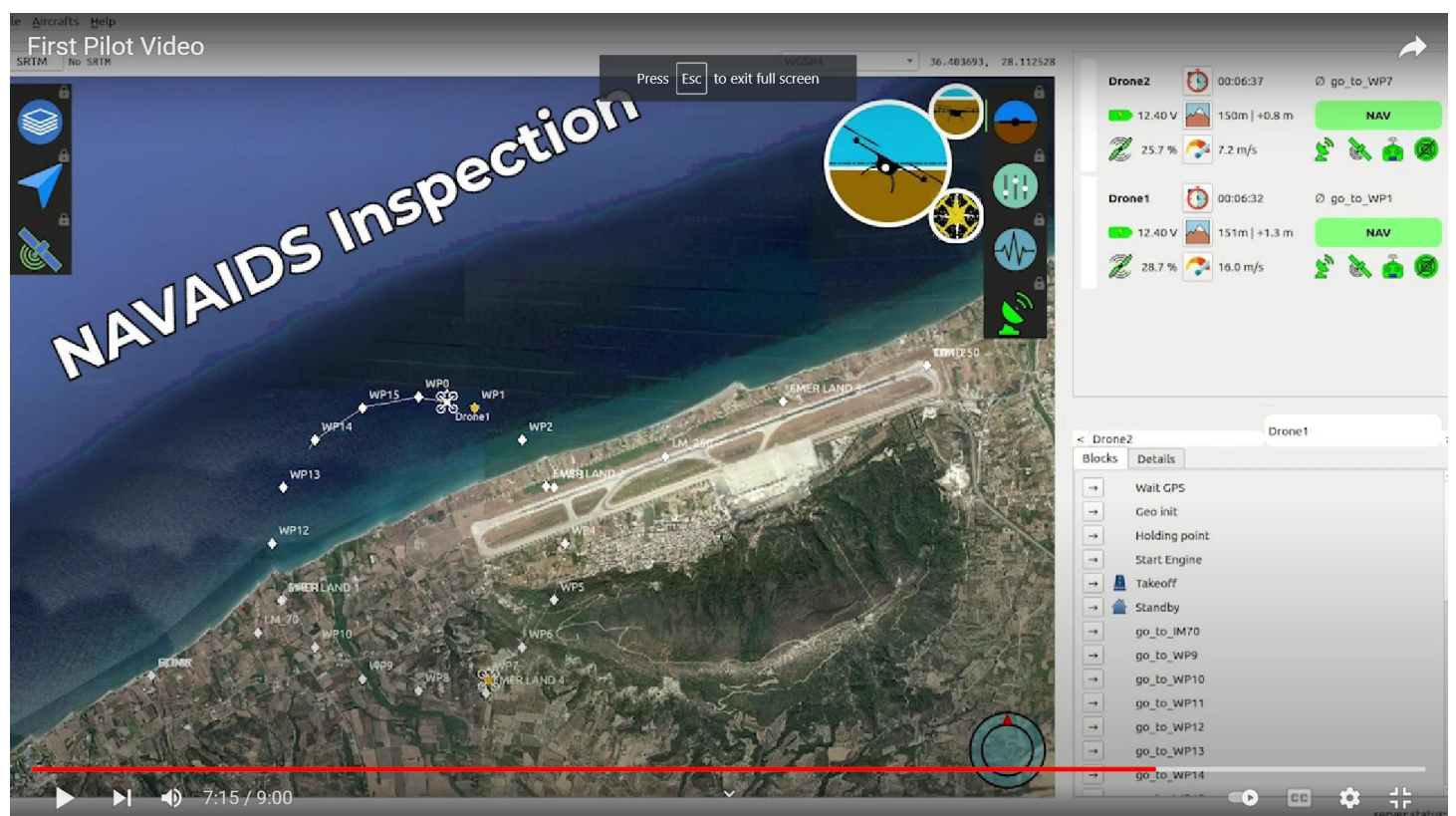


Figure 18 Navaids Inspection and Calibration