

PROJECT

## **ASPRID**

# **Airport System Protection from Intruding Drones**

**Funding:** European (Horizon 2020)

**Duration:** Nov 2020 - Nov 2022

**Status:** Ongoing

**Total project cost:** €1,235,195

**EU contribution:** €1,235,195



**Call for proposal:** H2020-SESAR-2019-2

[CORDIS RCN : 233251](#)

### **Background & policy context:**

ASPRID (Airport System Protection from Intruding Drones), is the response to the request made from SESAR under the Exploratory Research view, in order to cope with the problem of protecting the airport operations from drone intrusion (careless or malicious) under a holistic and operationally oriented approach.

### **Objectives:**

The Project proposes to investigate the vulnerability of airports under the different types of threat and possible ways of response, as well as to study the interrelations between all those aspects involving different scenarios. Risk analysis shall reveal and categorize the problem, from that, an architecture will be developed, dealing with the different steps and elements that can impact on operations, establishing adequate levels of alert, response and, if needed, neutralization.

### **Methodology:**

The stepped approach of the project will show these mainstreams:

1. Identification of problem: Threat(s), assets to protect (Airport, ATM, Aircraft), operations,
2. Setting scenarios: Risk and vulnerability assessment, hierarchization, selection, requirements.
3. Definition of an operational oriented architecture:
  - a) at the managerial level: Alert system and levels, Communications, Decisions, Response.
  - b) at specific technology elements: Detection, Identification, Tracking, Neutralization.
4. Concept Validation activities: HMI-based solutions, sensitivity studies, integration of elements and subsystems in the airport environment.
5. Concept Support activities: Review and assessment of regulations and procedures (normal and emergency).

ASPRID consortium members have experience with Airport and ATM operations as well as with drone performances and capabilities. A part of the consortium is also experienced in the development of SW and SW/HW based solutions to approach a system that is able to cope with the problem of decision making in real-time by providing the end-users with the correct level of awareness and response to deal with the type and level of threat.

### **Parent Programmes:**

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

**Other programmes:** SESAR-ER4-13-2019 Innovation in Airport Operations

**Lead Organisation:**

**Instituto Nacional De Tecnica Aeroespacial Esteban Terradas**

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<http://www.inta.es>

**EU Contribution:** €200,403

**Partner Organisations:**

**Enaire**

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AVENIDA DE ARAGON S/N BLOQUE 330, PORTAL 2 PARQUE EMPRESARIAL LAS MERCEDES  
28022 MADRID  
Spain

**Organisation Website:**

<http://www.aena.es>

**EU Contribution:** €145,875

**Office National D'etudes Et De Recherches Aerospatiales**

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CHEMIN DE LA HUNIERE  
91120 PALAISEAU  
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**Organisation Website:**

<http://www.onera.fr>

**EU Contribution:** €165,451

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**EU Contribution:** €211,190

**Ali Aerospace Laboratory For Innovative Components Scarl**

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**EU Contribution:** €189,120

**Aena S.m.e. Sa****Address:**

CALLE PEONIAS 12  
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**EU Contribution:** €188,750**Soul Software Srl****Address:**

VIALE SAN MODESTINO 33  
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**EU Contribution:** €134,406**Technologies:**

Aircraft operations and safety  
Drone traffic management system

**Development phase:** Research/Invention

Network and traffic management systems, Other

**STRIA Roadmaps:** specified**Transport mode:** Air transport**Transport sectors:** Passenger transport, Freight transport**Transport policies:** Safety/Security**Geo-spatial type:** Other