

PROJECT

## INVIRCAT

### IFR RPAS Control in Airports and TMA

**Funding:** European (Horizon 2020)

**Duration:** Jul 2020 - Dec 2022

**Status:** Ongoing

**Total project cost:** €1,614,614

**EU contribution:** €1,416,055



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

[CORDIS RCN : 229753](#)

#### Objectives:

This proposal addresses the topic “Control of RPAS in the TMA” of the H2020 call “SESAR-ER4-28-2019”. Its objective is to provide means for a safe and efficient integration of RPAS (Remotely Piloted Aircraft Systems) into the existing Air Traffic Control (ATC) procedures and infrastructures within Terminal Manoeuvring Areas (TMA) under Instrument Flight Rules (IFR). The main goals of the INVIRCAT project are the creation of a concept of operations for remotely piloted aircraft systems in the terminal manoeuvring area of airports, assessing it through simulations and draft a set of recommendations for rule makers and standardization bodies.

In INVIRCAT a CONOPS will be elaborated for full accommodation of RPAS in TMA environments, including Automatic Take-Off and Landing (ATOL) procedures. These CONOPS will serve as a basis for implementing a cooperative, heterogeneous and distributed simulation infrastructure to enable a full IFR RPAS flight from one airport to another including all phases of flight. Based on the results of the simulations and the validation of the CONOPS a set of high-level operational and technical requirements will be defined.

To meet the objectives, the INVIRCAT consortium is formed of a balanced group representing the most innovative research arms of the ATM, ATC, UAS, UTM and UAM industries. In addition, a close collaboration with related projects on the topics “SESAR-ER4-29-2019: Remain Well Clear for IFR RPAS Integration in Class D-G Airspace” and “SESAR-ER4-30-2019: RPAS for Manned Flight Contingency Management” will be established, to feed their results into the concept of INVIRCAT. An Advisory Board will be set up to validate the requirements and to explore the challenges presented by the co-existence of conventional manned aviation, drones and UAM aircraft in aerodrome environments.

#### 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-ER4-28-2019 Control of IFR RPAS in the TMA

#### Lead Organisation:

**Deutsches Zentrum Fr Luft Und Raumfahrt E.v**

**Address:**

Linder Hoehe  
51147 KOELN  
Germany

**Organisation Website:**

<http://www.dlr.de>

**EU Contribution:** €501,875

## **Partner Organisations:**

### **Ingenieria De Sistemas Para La Defensa De Espana Sa-Sme Mp**

**Address:**

Calle Beatriz De Bobadilla 3  
28040 Madrid  
Spain

**EU Contribution:** €108,480

### **Stichting Nationaal Lucht En-Ruimtevaartlaboratorium**

**Address:**

Anthony Fokkerweg 2  
1059CM AMSTERDAM  
Netherlands

**Organisation Website:**

<http://www.nlr.nl>

**EU Contribution:** €234,950

### **Deep Blue Srl**

**Address:**

Via Ennio Quirino Visconti 8  
193 Roma  
Italy

**EU Contribution:** €168,125

### **Eurocontrol - European Organisation For The Safety Of Air Navigation**

**Address:**

Rue De La Fusée 96  
1130 Bruxelles  
Belgium

### **C.i.r.a. Centro Italiano Ricerche Aerospaziali Scpa**

**Address:**

VIA MAIORISE  
81043 CAPUA  
Italy

**Organisation Website:**

<http://www.cira.it>

**EU Contribution:** €248,875

### **Institute For Sustainable Society And Innovation**

**Address:**

VICO TRONE 19  
80136 NAPOLI  
Italy

**EU Contribution:** €153,750

**Technologies:**

Information systems

Air traffic management systems

**Development phase:** Validation

**STRIA Roadmaps:** Network and traffic management systems

**Transport mode:** Air transport

**Transport sectors:** Passenger transport, Freight transport

**Transport policies:** Safety/Security

**Geo-spatial type:** Other