

PROJECT

TERRA

Technological European Research for RPAS in ATM

Funding: European (Horizon 2020)

Duration: Oct 2017 - Sep 2019

Status: Complete

Total project cost: €937,000

EU contribution: €937,000



Call for proposal: H2020-SESAR-2016-1

[CORDIS RCN : 210372](#)

Objectives:

TERRA Project addresses the research topic H2020-SESAR-2016-1 RPAS04: Ground-based technology, focusing on the performance requirements associated with the UTM concept, and identifying the technologies (existing and new) which could meet these requirements. TERRA proposes a technical architecture to support VLL RPAS operations, which are assumed to encompass interaction with VFR traffic.

The main project objectives are the following:

- Requirements identification: A set of operational and functional ground-based system requirements will be defined for three representative RPAS operational business cases, considering operator requirements but also potential impacts on stakeholders.
- Technological applicability: Analysis of applicability of existing CNS/ATM technologies which could be applied to UTM, identification and development of new technologies (e.g. machine learning classification of flight trajectories) and analysis of their applicability, considering in both cases the performance provided by these technologies with the requirements imposed upon their use.
- Architecture proposal and proof of concept: Identification of the most appropriate technologies, comparing their performance and applicability with the user requirements and definition of a technical architecture, which will be evaluated by means of a proof of concept demonstration.

To achieve these objectives, the Consortium consists of a range of companies bringing complementary expertise (research, operational, industrial) covering all the elements of ground-based technologies for UTM. Additionally, an Advisory Board of stakeholders and developers has been formed to assist the consortium on the requirements, identification and proposals validation.

Finally, a proof of concept demonstration of the proposed architecture will be conducted, leveraging existing simulation platforms previously developed by members of the consortium. TERRA aims to safely facilitate up to 1 million VLL RPAS flights by 2025.

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)

Lead Organisation:

Ingenieria Y Economia Del Transporte Sme Mp Sa

Address:

Avenida Del Partenón
28042 Madrid
Spain

EU Contribution: €186,750

Partner Organisations:

Centro De Referencia Investigacion Desarrollo E Innovacion Atm, A.i.e.

Address:

Avda De Aragon 402 4 Edificio Allende
N/A Madrid
Spain

EU Contribution: €113,250

Stichting Centrum Voor De Ontwikkeling Van Transport En Logistiek In Europa

Address:

Van Nelleweg 1
3044 BC Rotterdam
Netherlands

Organisation Website:

<http://www.cetle.org>

EU Contribution: €175,750

Chpr Center For Human Performance Research Bv

Address:

OOSTEINDE 263
2272 AE VOORBURG
Netherlands

EU Contribution: €88,500

C-Astral Proizvodnja Zracnih In Vesoljskih Plovil Doo

Address:

GREGORCICEVA ULICA 20
5270 AJDOVSCINA
Slovenia

EU Contribution: €115,500

Leonardo - Societa Per Azioni

Address:

Piazza Monte Grappa 4
195 Roma
Italy

EU Contribution: €257,250

Technologies:

Aircraft operations and safety
Trajectory Based Flight Operations

Development phase: Research/Invention

STRIA Roadmaps: Network and traffic management systems

Transport mode: Air transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Other specified

Geo-spatial type: Other