ECSEL Joint Undertaking
Electronic Components and Systems for European Leadership

COMP4DRONES

Running Time 01/10/2019– 30/09/2022
ECSEL JU under grant agreement No [826610]

Framework of key enabling technologies for safe and autonomous drones' applications

Challenges and objectives

COMP4DRONES project aims to provide a framework of key enabling technologies for safe and autonomous drones. It brings to bear a holistically designed ecosystem from application to electronic components, realized as a tightly integrated multi-vendor and compositional UAV embedded architecture solution and a tool chain complementing the compositional architecture principles.

1	2	3	4	5
Ease the **integration and customization** of embedded drone systems	Enable drones to take **safe autonomous decisions.**	Ensure the deployment of **trusted communications.**	Minimize the **design and verification effort** for complex drone applications	Ensuring **sustainable impact** and creation of an industry-driven community

Use Cases

Transport
Drones for optimization of transport control, operation and infrastructure management

Construction
Drones for virtual design, construction and operation of transport infrastructures

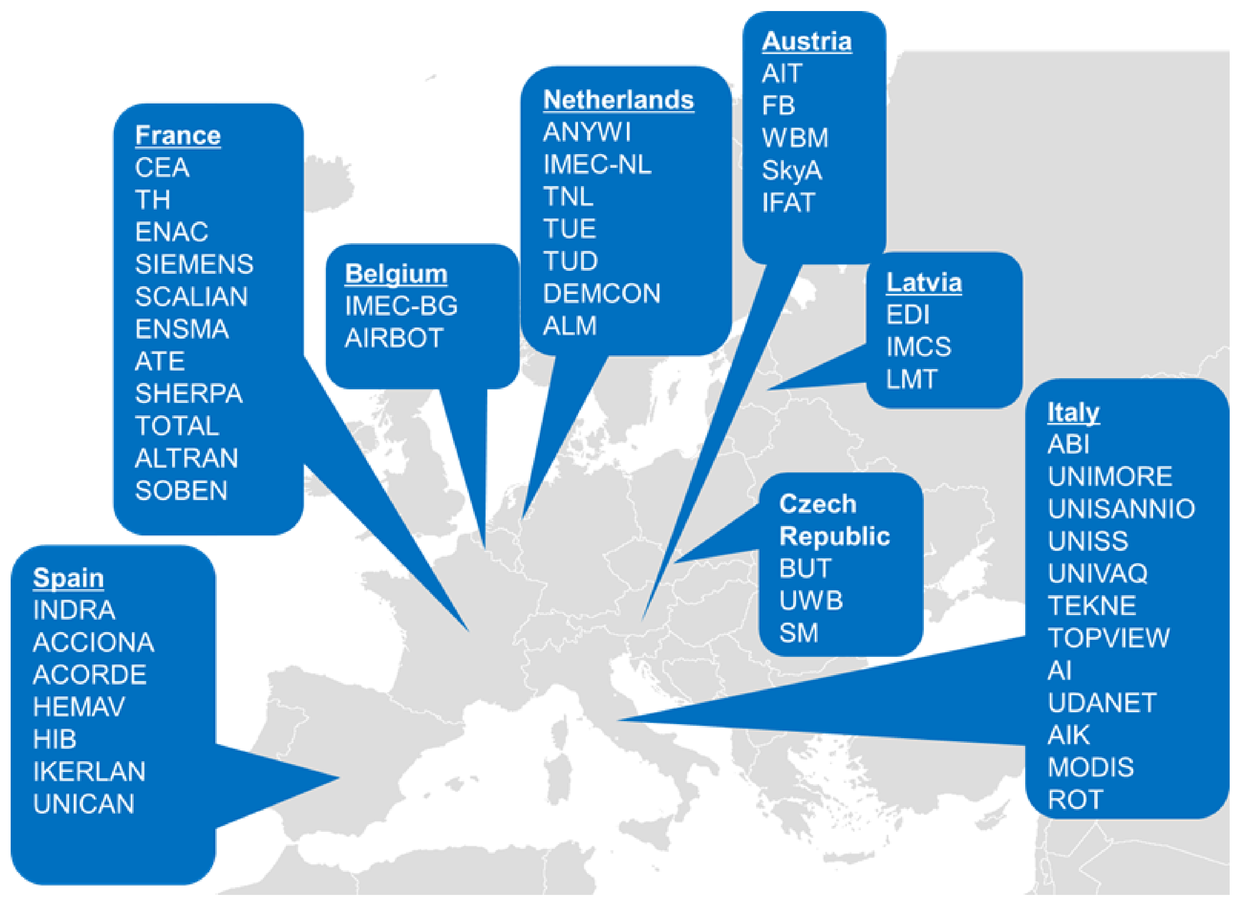
Logistics
Logistic using heterogeneous drones fleet

Surveillance & Inspection
Drone and wheeled robotic systems for inspection, surveillance and rescue operations

Agriculture
Smart and Precision Agriculture: From drone to rover

Expected impact

- Reinforcing the ecosystems of drones industry by providing methodology and a reference software architecture framework that meets performance and safety requirements
- Improving innovation capacity and the integration of new knowledge. A structuring aspect of COMP4DRONES is the adoption of a "safe-by-design" approach which covers the activities of (1) specification, (2) design, (3) implementation, and (4) validation & verification
- Enabling and easing delivery of new services using drones in Europe. The biggest security risk for drone use is not the drone itself, but the technology inside of it.



Start date: 01 October 2019
Duration: 36 months
Total costs: 29.76 M€
Number of participants: 49
Number of countries: 08
Project coordinator: R. Castiñeira, INDRA
Technical coordinator: R. Nouacer, CEA

BUCHAREST
ECSEL JU SYMPOSIUM
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SHAPING DIGITAL INNOVATION