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COMP4DRONES will provide a **framework** of key enabling technologies for **safe and autonomous drones** that will leverage their **customization and modularity** for civilian services

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October 2019 — September 2022

49

Partners

Project Coordinator

Technical Coordinator

29.76M€

Budget

ECSEL Joint Undertaking

Electronic Components and Systems for European Leadership

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Project Objectives

Easing the integration and customization of drone **embedded system**

Enabling drones to take **safe autonomous decisions**

Ensure the deployment of **trusted communications**

Minimizing the **design and verification** efforts for complex drone applications

Ensuring **sustainable impact** and creation of an industry-driven community

Safe and Autonomous

Smart navigation systems and sensory fusion technologies for real-time applications will be developed, such as visual object recognition, attention, and multi-sensory integration.

Trusted Communications

Development of trusted communications dealing with the identification of cyber-security threats, their risk and scope evaluation and the deployment of the decision and/or actions to mitigate or protect against those attacks.

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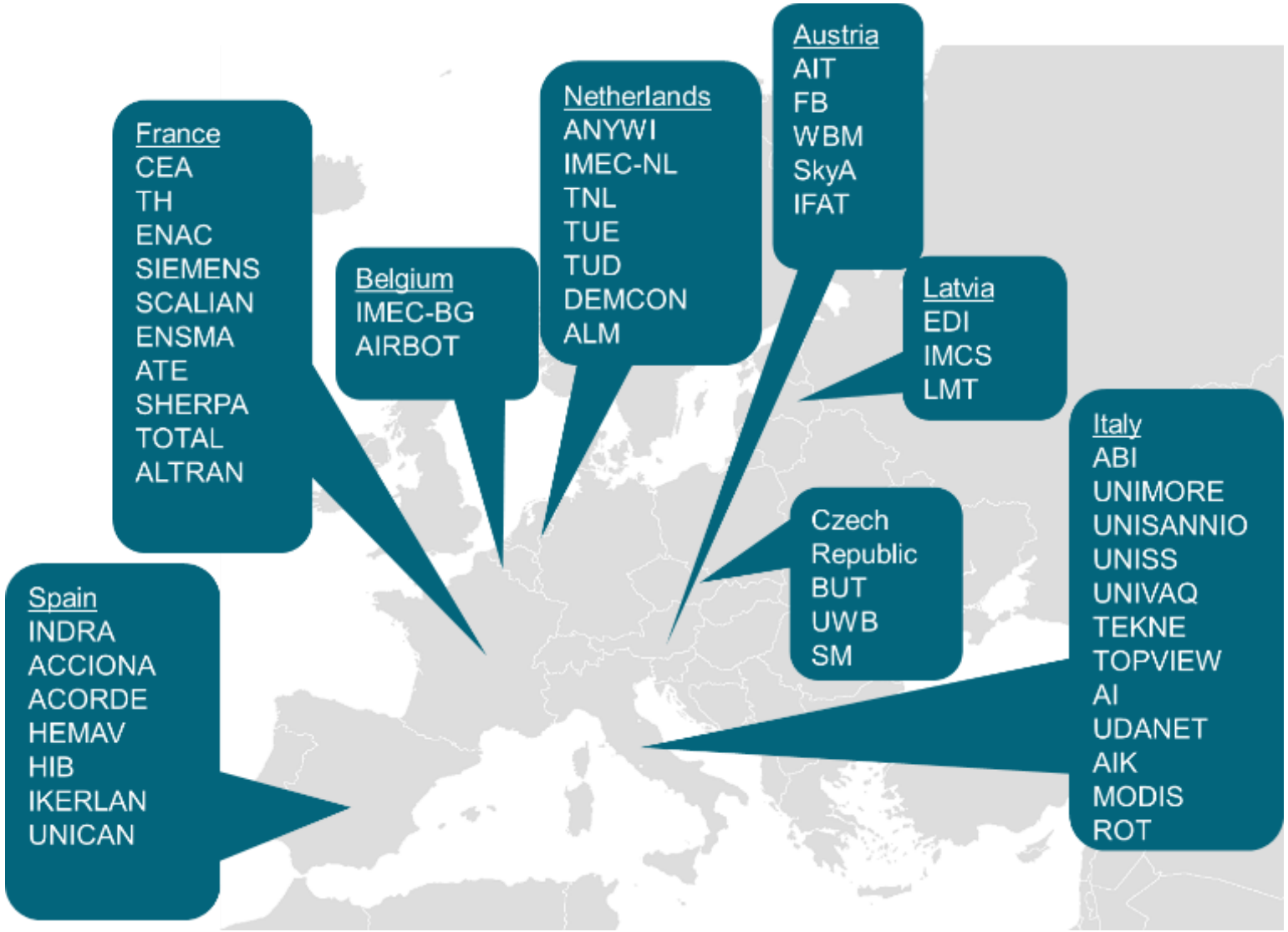
Consortium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WBM
SkyA
IFAT
Latvia
EDI
IMCS
LMT
Czech Republic
BUT
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UNISS
UNIVAQ
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TOPVIEW
AI
UDANET
AIK
MODIS
ROT
Spain
INDRA
ACCIONA
ACORDE
HEMAV
HIB
IKERLAN
UNICAN

Five relevant societal use cases

Transport

Drones for optimization of transport control, operation and infrastructure management

INDRA

Construction

Drones for virtual design, construction and operation of transport infrastructures

ACCIONA
HIB
ACORDE
UNICAN
INDRA-PROINTEC

Logistics

Logistics using heterogeneous drone fleets

TOTAL
ALTRAN
ATE
ENSMA
SCALIAN
SHERPA
SIEMENS
SOBEN
ENAC

IMCS
LMT

Surveillance & Inspection

Drone and wheeled robotic systems for inspection, surveillance and rescue operations

TNL
ANYWI
DEMCOM
IMEC-NL
TUD
TUE

IMEC-BG
AIROBOT
BUT
SM

Agriculture

Smart precision agriculture: from drone to rover

AIT
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IFAT
SKYA
WBM
ALM

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Transport

In this Use Case the drones will be used as novel monitoring devices for the road traffic and infrastructure conditions, enabling a faster detection and early response to incidents.

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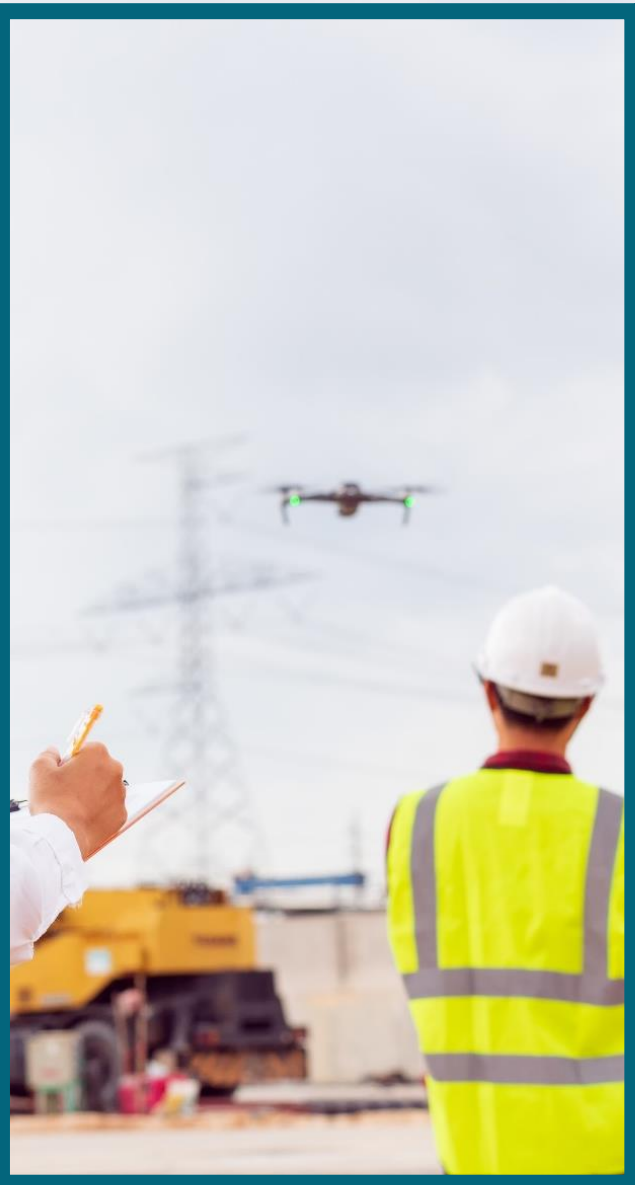


Construction

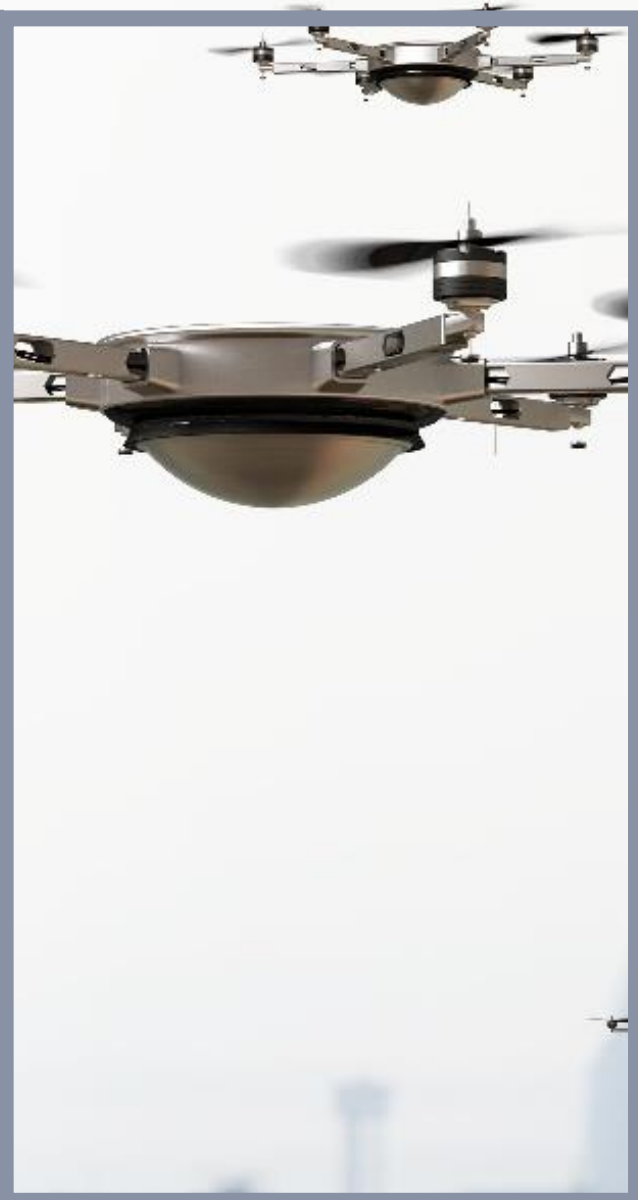
This Use Case aims to develop the technology required to carry out any type of operation that allows the Digitalization of the State of the Constructive Process of a Civil Infrastructure.

Logistics

This Use Case will test drone delivery capabilities as a fast and reliable method for transporting equipment, drugs or blood samples inside a large hospital territory.

Logistics

This Use Case will ease the deployment of an autonomous communication system by a fleet of drones in hard-to access areas.



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Surveillance and Inspection

The goal of this Use Case is to showcase the benefit of hyperspectral cameras on unmanned aerial vehicles for inspection of off-shore infrastructures.

This Use Case will also demonstrate the benefit of a fleet of drones and a land robot for mapping a disaster site.

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Agriculture

This Use Case will focus on technology needs for crop monitoring, focusing on crop health and growth management, and technology needs of wine cultivation.


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