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

Fact Sheet

Project Information

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<th>COMP4DRONES</th>
<th>Funded under H2020-EU.2.1.1.7.</th>
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<td>Grant agreement ID: 826610</td>
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Coordinated by

INDRA SISTEMAS SA
Spain

Start date
1 October 2019

End date
30 September 2022

Project description

Advanced solutions for safer drone use

The use of drones today is expanding as it reduces costs and offers environmental benefits. However, existing technologies could make drones’ usage harmful for humans, vehicles and properties. SESAR JU, in charge of EU research in air traffic management, suggested that further investments and motivations are needed for the safe use of drones. The ECSEL JU-funded project COMP4DRONES will work on safe software and hardware drone solutions aligned with SESAR objectives. Coordinated by Indra, COMP4DRONES brings together 49 partners from 8 countries aiming to build an ecosystem that will support the systemization and safety of drone platforms, reliable communications, cost-efficient and safe design of drones.
COMP4DRONES will deploy applications in five domains: transport, construction, surveillance and inspection, logistics and agriculture.

**Objective**

Drones can perform air operations that manned aircrafts struggle with, and their use brings significant economic savings and environmental benefits whilst reducing the risk to human life. Drone-based service and product innovation, as driven by increased levels of connectivity and automation, is limited by the growing dependence on poorly interoperable proprietary technologies and the risks posed to people, to other vehicles and to property. SESAR JU identified that issue has a high impact on European innovation, which demands R&D investments and incentives for the convergence of shared technologies and markets as a remedy. Actions creating globally harmonized, commercially exploitable yet widely accessible R&D ecosystems should be publicly performed. The COMP4DRONES project complements SESAR JU efforts with a particular focus on safe software and hardware drone architectures. COMP4DRONES will bear a holistically designed ecosystem ranging from application to electronic components, realized as a tightly integrated multi-vendor and compositional drone embedded architecture solution and a tool chain complementing the compositional architecture principles. The ecosystem aims at supporting (1) efficient customization and incremental assurance of drone embedded platforms, (2) safe autonomous decision making concerning individual or cooperative missions, (3) trustworthy drone-to-drone and drone-to-ground communications even in presence of malicious attackers and under the intrinsic platform constraints, and (4) agile and cost-effective compositional design and assurance of drone modules and systems. COMP4DRONES will also build an open sustainable ecosystem around public, royalty-free and goal-driven software platform standards that will ease the development of new drone functionalities for multiple application domains. Lead applications driving ecosystem development and benchmarking on the fields of transport, inspection, logistic, precision agriculture, parcel delivery.

**Fields of science**

- - - -
- - - - -
- - -

**Programme(s)**
Topic(s)

Call for proposal

H2020-ECSEL-2018-2-RIA-two-stage-1

Funding Scheme

ECSEL-RIA - ECSEL Research and Innovation Action

Coordinator

INDRA SISTEMAS SA

Address
Avenida De Bruselas 35
28108 Alcobendas Madrid
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Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

EU contribution
€ 674 542,01

Website
Contact the organisation

Participants (49)

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH

Address
Giefinggasse 4
1210 Wien

Activity type
Research Organisations

EU contribution
€ 197 927,19

Website
Contact the organisation

FORSCHUNG BURGENLAND GMBH

Address
Campus 1
7000 Eisenstadt

Activity type
Research Organisations
MORAVITZ MARTIN

- Austria
- EU contribution: € 41 175

Address: Mitterweg 1/6, 7023 Zemendorf
Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM

- Belgium
- EU contribution: € 183 704,50

Address: Kapeldreef 75, 3001 Leuven
Activity type: Research Organisations

Website

Contact the organisation

VYSOKE UCENI TECHNICKE V BRNE

- Czechia
- EU contribution: € 203 481,25

Address: Antoninska 548/1, 601 90 Brno Stred
Activity type: Higher or Secondary Education Establishments

Website

Contact the organisation

ZAPADOCESKA UNIVERZITA V PLZNI

- Czechia
- EU contribution: € 152 687,50

Address: Univerzitni 8, 306 14 Pilsen
Activity type: Higher or Secondary Education Establishments

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EU contribution
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Zuidelijke Havenweg 40
7554 RR Hengelo Ov
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Website
Contact the organisation

SKYABILITY GESMBH
Austria
EU contribution
€ 82 125
Address
Gzo Dienstleistungszentrum 4/3
7011 Siegendorf
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Contact the organisation

TECHNISCHE UNIVERSITEIT EINDHOVEN
Netherlands
EU contribution
€ 159 672,19
Address
Groene Loper 3
5612 AE Eindhoven
Activity type
Higher or Secondary Education Establishments
Website
Contact the organisation

ACCIONA CONSTRUCCION SA
Spain
EU contribution
€ 72 365,63
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Spain
EU contribution
€ 213 609,38
Address
P Jose Maria Arizmendiarieta 2
20500 Mondragon
Activity type
Research Organisations
Website
Contact the organisation

COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
France
EU contribution
€ 799 649,05
Address
Rue Leblanc 25
75015 Paris 15
Activity type
Research Organisations
Website
Contact the organisation

UNIVERSIDAD DE CANTABRIA
Spain
EU contribution
€ 140 773,94
Address
Avenida De Los Castros S/n
39005 Santander
Activity type
Higher or Secondary Education Establishments
Website
Contact the organisation

AITEK SPA
Italy
EU contribution
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16122 Genova Ge
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### DEMCON UNMANNED SYSTEMS BV
- **Country**: Netherlands
- **EU Contribution**: € 158,906.26
- **Address**: Institutenweg 25, 7521 PH Enschede
- **Activity Type**: Private for-profit entities (excluding Higher or Secondary Education Establishments)

### UD'ANET SRL
- **Country**: Italy
- **EU Contribution**: € 0
- **Address**: Piazza San Rocco 2, 66010 Torrevecchia Teatina, Chieti
- **Activity Type**: Private for-profit entities (excluding Higher or Secondary Education Establishments)

### SHERPA ENGINEERING SA
- **Country**: France
- **EU Contribution**: € 246,282.75
- **Address**: Avenue De Verdun 1916 12, 92250 La Garenne Colombes
- **Activity Type**: Private for-profit entities (excluding Higher or Secondary Education Establishments)

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FUNDACION ANDALUZA PARA EL DESARROLLO AEREOESPACIAL

Spain

€ 152,295,50

Address

Calle Wilbur Y Orville Wright
Num 17, Parque Aerop
41039 La Rinconada Sevilla

Activity type

Research Organisations

Website

Contact the organisation

Last update: 17 May 2021
Record number: 223632

Permalink: https://cordis.europa.eu/project/id/826610

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