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

Fact Sheet

Project Information

COMP4DRONES
Grant agreement ID: 826610

Funded under
H2020-EU.2.1.1.7.

Overall budget
€ 29 391 259,83

EU contribution
€ 7 973 441,62

Coordinated by
INDRA SISTEMAS S.A.
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**

**Coordinator**

INDRA SISTEMAS S.A.

Address
Avenida De Bruselas 35
28108 Alcobendas-madrid
Spain

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**

Austria

EU contribution
€ 197 927,19

Address
Giefinggasse 4
1210 Wien

Activity type
Research Organisations

Website
Contact the organisation

**FORSCHUNG BURGENLAND GMBH**

Austria

EU contribution
€ 145 250

Address
Campus 1
7000 Eisenstadt

Activity type
Research Organisations

Website
Contact the organisation
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Latvia
EU contribution
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Address
Dzerbenes iela 14
1006 Riga
Activity type
Research Organisations
Website
Contact the organisation

LATVIJAS UNIVERSITATES MATEMATIKAS UN INFORMATIKAS INSTITUTS
Latvia
EU contribution
€ 113 050
Address
Raina Bulvaris 29
1459 Riga
Activity type
Research Organisations
Website
Contact the organisation

ANYWI TECHNOLOGY BV
Netherlands
EU contribution
€ 133 155
Address
3E Binnenvestgracht 23 H
2312 NR Leiden
Activity type
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EU contribution
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30100 Plzen
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

ATECHSYS ENGINEERING
France
EU contribution
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Address
6581 Route De Rians Le Planet
83910 Pourrieres
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

AIROBOT
Belgium
EU contribution
€ 129 000
Address
Lichtenberglaan 1090
3800 Sint-truiden
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

TECHNISCHE UNIVERSITEIT DELFT
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Stevinweg 1
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Higher or Secondary Education Establishments
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Contact the organisation

FUNDACION ANDALUZA PARA EL DESARROLLO AEREOESPACIAL
Spain
EU contribution
€ 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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