European Concept for Higher Altitude Operations Phase 2: Towards the integration between Air Traffic Management and Higher Altitude Operations

Fact Sheet

Project Information

ECHO 2
Grant agreement ID: 101114697

DOI
10.3030/101114697

Funded under
Climate, Energy and Mobility

Total cost
€ 1 484 973 1.25

EU contribution
€ 7 030 567.87

Coordinated by
EUROCONTROL - EUROPEAN ORGANISATION FOR THE SAFETY OF AIR NAVIGATION
Belgium

Objective

The European airspace above FL550 is expected to become an area where operations will significantly expand as a result of increased new entrants presence representing both aviation and space domains, with estimated business values in the order of billions of euros per year.

The European Air Traffic Management (ATM) system, including ATC’s operational
procedures and systems, needs modernization and adaptation to allow seamless integration of Higher Altitude Operations (HAO) because of vastly different characteristics of vehicles and associated operational, safety and performance requirements.

ECHO-2 will build on the deliverables of the ECHO (European Concept of Higher airspace Operations) project, starting from the Concept of Operations, to propose validated solutions paving the way towards the operational integration of HAO in ATM, on three directions:
- Space Launch Real Time Monitoring Module and associated working station for the European ATM Network Manager for increased situational awareness at Network level, supporting Air Traffic Flow Management as well as crisis and contingency management.
- Procedural Package covering specific ground and air-ground operational integration issues (including for communications, navigation and surveillance means) associated with the integration of High-Altitude Platform Systems (HAPS) operations into ATM.
- Procedural Package covering specific ground and air-ground operational integration issues (including for communications, navigation and surveillance means) associated with the integration of supersonic, hypersonic and suborbital vehicles operations into ATM.

These solutions will propose all the elements needed by the European ATM Network operational stakeholders for a rapid, harmonized and cost-effective implementation of a European approach towards the integration between ATM and HAO, at TRL6 maturity. They will also include assessments of potential specific related standardization and regulatory activities.

**Fields of science**

social sciences > social geography > transport > transport planning > air traffic management

**Keywords**

New Entrants Operational Integration Higher Altitude Operations Supersonic Hypersonic Suborbital HAPS

**Programme(s)**

HORIZON.2.5 - Climate, Energy and Mobility

**Topic(s)**
Call for proposal

HORIZON-SESAR-2022-DES-IR-01

See other projects for this call

Funding Scheme

HORIZON-JU-RIA - HORIZON JU Research and Innovation Actions

Coordinator

EUROCONTROL - EUROPEAN ORGANISATION FOR THE SAFETY OF AIR NAVIGATION

Net EU contribution

€ 0,00

Address

Rue de la fusée 96
1130 Brussels / bruxelles
Belgium

Region

Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest > Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest > Arr. de Bruxelles-Capitale/Arr. Brussels-Hoofdstad

Links

Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Other funding

€ 4 741 662,50

Participants (22)
C.I.R.A. CENTRO ITALIANO RICERCHE AEROSPAZIALI SCPA

Italy

Net EU contribution

€ 378 612,50

Address

Via maiorise
81043 Capua

Region

Sud > Campania > Caserta

Links

Contact the organisation  
Website  
Participation in EU R&I programmes  
HORIZON collaboration network

Other funding

€ 162 262,50

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LEONARDO - SOCIETA PER AZIONI

Italy

Net EU contribution

€ 656 250,00

Address

Piazza monte grappa 4
00195 Roma

Region

Centro (IT) > Lazio > Roma

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

Contact the organisation  
Website  
Participation in EU R&I programmes  
HORIZON collaboration network

Other funding

€ 281 250,00
DESTINUS SPAIN SL
Spain
Net EU contribution
€ 699 671,88
Address
Comercio 4 local b
28760 Tres cantos
Region
Comunidad de Madrid > Comunidad de Madrid > Madrid
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network
Other funding
€ 299 859,37

DFS DEUTSCHE FLUGSICHERUNG GMBH
Germany
Net EU contribution
€ 109 900,00
Address
Am dfs campus 10
63225 Langen
Region
Hessen > Darmstadt > Offenbach, Landkreis
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network
ENAIRE
Spain
Net EU contribution
€ 164 175,38
Address
Avenida de aragon s/n bloque 330, portal 2 parque empresarial las mercedes
28022 Madrid
Region
Comunidad de Madrid > Comunidad de Madrid > Madrid
Activity type
Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)
Links
Contact the organisation  
Website
Participation in EU R&I programmes
HORIZON collaboration network
Other funding
€ 70 360,87

THIRD-PARTY

INGENIERIA Y ECONOMIA DEL TRANSPORTE SME MP SA
Spain
Net EU contribution
€ 109 941,00
Address
Paseo de la habana 138
28036 Madrid
Region
Comunidad de Madrid > Comunidad de Madrid > Madrid
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
ECOLE NATIONALE DE L'AVIATION CIVILE
France
Net EU contribution
€ 110 687,50
Address
Avenue edouard belin 7
31400 Toulouse
Region
Occitanie > Midi-Pyrénées > Haute-Garonne
Activity type
Higher or Secondary Education Establishments
Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network
Other funding
€ 47 437,50

ENTE NAZIONALE PER L'AVIAZIONE CIVILE - ENAC ITALIAN CIVIL AVIATION AUTHORITY
Italy
Net EU contribution
€ 370 898,50
Address
Viale castro pretorio 118
00185 Roma
Region
Centro (IT) > Lazio > Roma

Activity type
Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 158 956,50

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ENAV SPA
Italy
Net EU contribution
€ 276 718,75

Address
Via salaria 716
00138 Roma

Region
Centro (IT) > Lazio > Roma

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 118 593,75

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AIRBUS OPERATIONS SL
Spain
Net EU contribution
€ 350 000,00

Address

8 of 16
**DIRECTION DES SERVICES DE LA NAVIGATION AERIENNE**

- **Country:** France
- **Address:** 50 rue henry farman, 75720 Paris
- **Activity type:** Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)
- **Net EU contribution:** € 92 575,00

**EUROPEAN SATELLITE SERVICES PROVIDER SAS**

- **Country:** France
- **Address:** 50 rue henry farman, 75720 Paris
- **Activity type:** Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)
- **Net EU contribution:** € 44 133,25
Address
3 rue tarfaya
31400 Toulouse

Region
Occitanie > Midi-Pyrénées > Haute-Garonne

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 18 914,25

OKAPI: ORBITS GMBH
Germany

Net EU contribution
€ 39 305,00

Address
Rebenring 33
38106 Braunschweig

SME
Yes

Region
Niedersachsen > Braunschweig > Braunschweig, Kreisfreie Stadt

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 16 845,00
LUFTFARTSVERKET

Sweden

Net EU contribution

€ 197,137,00

Address

Hospitalsgatan 30
602 27 Norrkoping

Region

Östra Sverige > Östra Mellansverige > Östergötlands län

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Other funding

€ 84,488,00

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THIRD-PARTY

LINKOPINGS UNIVERSITET

Sweden

Net EU contribution

€ 131,250,00

Address

Campus valla
581 83 Linköping

Region

Östra Sverige > Östra Mellansverige > Östergötlands län

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding

€ 56,250,00
COLLINS AEROSPACE IRELAND, LIMITED

Ireland
Net EU contribution
€ 335,241.38

Address
Penrose quay penrose wharf penrose business centre fourth floor
T23 Cork

Region
Ireland > Southern > South-West

Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Other funding
€ 143,674.87

HYIMPULSE TECHNOLOGIES GMBH

Germany
Net EU contribution
€ 262,500.00

Address
Wilhelm maybach strasse 5
74196 Neuenstadt am Kocher

SME
Yes

Region
Baden-Württemberg > Stuttgart > Heilbronn, Landkreis

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation Participation in EU R&I programmes HORIZON collaboration network
DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV

Germany
Net EU contribution
€ 761 250,00
Address
Linder hohe
51147 Köln
Region
Nordrhein-Westfalen > Köln > Köln, Kreisfreie Stadt

SKYDWELLER SL

Spain
Net EU contribution
€ 1 800 000,13
Address
Aerodromo manuel sanchez valdepenas
13300 Ciudad real
Region
Centro (ES) > Castilla-La Mancha > Ciudad Real
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Other funding
€ 112 500,00

Other funding
€ 326 250,00
THALES LAS FRANCE SAS
France
Net EU contribution
€ 91 875,00
Address
Avenue gay lussac 2
78990 Elancourt
Region
Ile-de-France > Ile-de-France > Yvelines
Links
Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network

NAVEGACAO AEREA DE PORTUGAL - NAV PORTUGAL EPE
Portugal
Net EU contribution
€ 48 445,60
Address
Rua d edificio 121 aeroporto de
1700 008 Lisboa
Region
Continente > Área Metropolitana de Lisboa > Área Metropolitana de Lisboa
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network
THALES ALENIA SPACE FRANCE SAS

France

Net EU contribution

€ 0,00

Address
Avenue jean francois champollion 26
31100 Toulouse

Region
Occitanie > Midi-Pyrénées > Haute-Garonne

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network

Other funding

€ 47 097,50

Partners (2)

AALTO HAPS LIMITED

United Kingdom

Net EU contribution

€ 0,00

Address
Gunnels wood road, stevenage
SG1 2AS Herfordshire

Region
East of England > Bedfordshire and Hertfordshire > Hertfordshire
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 0,00

NATS (EN ROUTE) PUBLIC LIMITED COMPANY
United Kingdom
Net EU contribution
€ 0,00

Address
4000 parkway whiteley
PO15 7FL Fareham

Region
South East (England) > Hampshire and Isle of Wight > Central Hampshire

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 0,00

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