Copernicus - eoSC AnaLytics Engine

Fact Sheet

Project Information

C-SCALE

Grant agreement ID: 101017529

DO

10.3030/101017529

Funded under
EXCELLENT SCIENCE - Research Infrastructures

Total cost
€ 1 999 670

EU contribution
€ 1 999 670

Start date
1 January 2021

End date
30 June 2023

Coordinated by
EODC EARTH OBSERVATION
DATA CENTRE FOR WATER
RESOURCES MONITORING
GMBH

Austria

Project description

Eyes on the world will soon do more than observe

In the 20 years since the European Union and the European space industry made a long-term commitment to the development of a space-based environmental monitoring system, Copernicus has grown into the preeminent source of environmental information in the world. It integrates a plethora of data collected from satellite, ground-based, airborne and seaborne sources. Making the discovery, access and processing of these resources possible through the European Open Science Cloud (EOSC) is the key motivation of EU-funded C-SCALE project. This will catalyse further innovative Earth Observation-based research and development
activities. The project's Big Copernicus Data Analytics services will streamline the integration of models, projects and programmes, with concrete production-ready pilot applications used to drive and validate the technical work.

**Objective**

The EU Copernicus programme has established itself globally as the predominant spatial data provider, through the provision of massive streams of high resolution earth observation (EO) data. These data are used in environmental monitoring and climate change applications supporting European policy initiatives, such as the Green Deal and others. To date, there is no single European processing back-end that serves all datasets of interest, and Europe is falling behind international developments in big data analytics and computing. This situation limits the integration of these data in science and monitoring applications, particularly when expanding the applications to regional, continental, and global scales.

The proposed C-SCALE (Copernicus - eoSC AnaLytics Engine) project aims to federate European EO infrastructure services, such as the Copernicus DIAS and others. The federation shall capitalise on the European Open Science Cloud’s (EOSC) capacity and capabilities to support Copernicus research and operations with large and easily accessible European computing environments. That would allow the rapid scaling and sharing of EO data among a large community of users by increasing the service offering of the EOSC Portal.

By making such a scalable Big Copernicus Data Analytics federated services available through EOSC and its Portal and linking the problems and results with experience from other research disciplines, C-SCALE will help to support the EO sector in its development and furthermore will enable the integration of EO data into other existing and future domains within EOSC. By abstracting the set up of computing and storage resources from the end-users, C-SCALE will enable the deploying of custom workflows to quickly and easily generate meaningful results. The project will deliver a blueprint, setting up an interaction model between service providers to facilitate interoperability between commercial (e.g. DIAS-es) and public cloud infrastructures.

**Fields of science**

natural sciences › computer and information sciences › data science › big data
natural sciences › earth and related environmental sciences › atmospheric sciences › climatology › climatic changes
Programme(s)

H2020-EU.1.4. - EXCELLENT SCIENCE - Research Infrastructures

H2020-EU.1.4.1.3. - Development, deployment and operation of ICT-based e-infrastructures

Topic(s)

INFRAEOSC-07-2020 - Increasing the service offer of the EOSC Portal

Call for proposal

H2020-INFRAEOSC-2018-2020

See other projects for this call

Sub call

H2020-INFRAEOSC-2020-2

Funding Scheme

RIA - Research and Innovation action

Coordinator

EODC EARTH OBSERVATION DATA CENTRE FOR WATER RESOURCES MONITORING GMBH

Net EU contribution

€ 376 971,75

Address

Franz-grill-strasse 9
1030 Wien
Austria

Region

Wien > Wien

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)
Participants (10)

STICHTING EGI
Netherlands
Net EU contribution
€ 356 162,50
Address
Science Park 140
1098 XG Amsterdam
Region
West-Nederland > Noord-Holland > Groot-Amsterdam
Activity type
Other
Links
Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network
Other funding
€ 0,00

STICHTING DELTARES
Netherlands
Net EU contribution
€ 163 875,00
Address
Boussinesqweg 1
2629 HV Delft
Region

West-Nederland > Zuid-Holland > Delft en Westland

Activity type
Research Organisations

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

Other funding
€ 0,00

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CESNET ZAJMOVE SDRUZENI PRAVNICKYCH OSOB
Czechia
Net EU contribution
€ 168 747,00

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Zikova 4
160 00 Praha 6

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Praha > Hlavní město Praha

Activity type
Research Organisations

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

Other funding
€ 0,00

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ISTITUTO NAZIONALE DI FISICA NUCLEARE
Italy
Net EU contribution
€ 132 513,00

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Via Enrico Fermi 54
00044 Frascati
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Netherlands
Net EU contribution
€ 185 905,00
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VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V.
Belgium
Net EU contribution
€ 225 611,75
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Greece

Net EU contribution

€ 123 820,00

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Leoforos Kifisias 7
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Κεντρικός Τομέας Αθήνων > Αττική > Αττική

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

CLOUDFERRO SP ZOO

Poland

Net EU contribution

€ 120 318,00

Address
ASSOCIACAO INCD
Portugal
Net EU contribution
€ 75,227.25
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Av De Brasil 101
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Continente > Área Metropolitana de Lisboa > Área Metropolitana de Lisboa
Activity type
Research Organisations
Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network
Other funding
€ 0,00

TECHNISCHE UNIVERSITAET WIEN
Austria

Net EU contribution

€ 70 518,75

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Activity type

Higher or Secondary Education Establishments

Links

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Other funding

€ 0,00

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