AI4 copernicus

Annex 1:

1st Open Call Related Information

Reinforcing the AI4EU Platform by Advancing Earth
Observation Intelligence, Innovation and Adoption
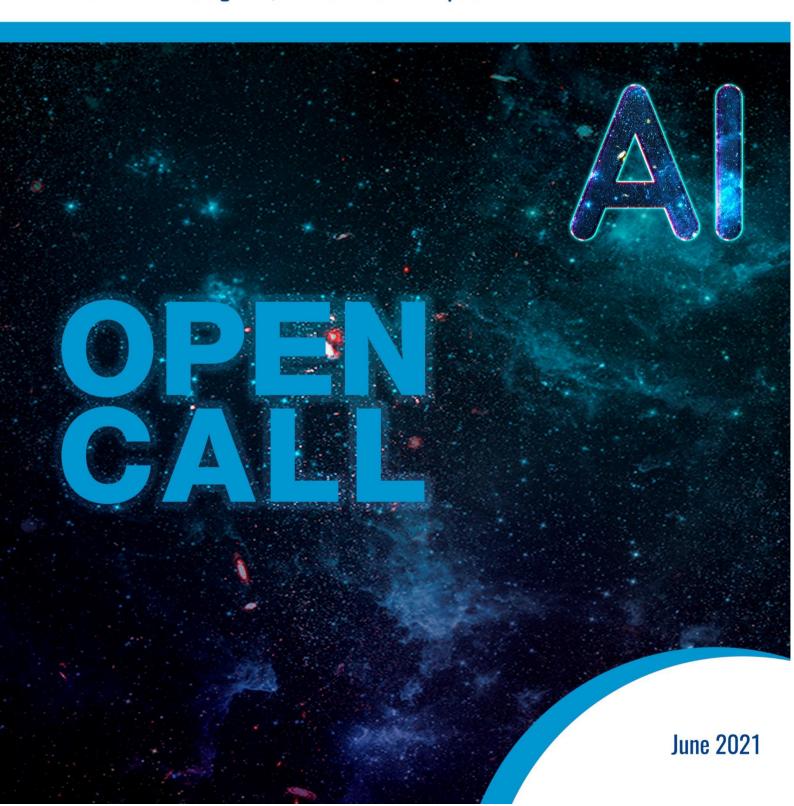
OPEN
CALL

AI

Table of Contents

1. Introduction

This document provides a full set of information regarding the first (#1) Open Call for Proposals for the AI4Copernicus project, as well as an overview of the project.

The text for the 1st Round of Open Calls can be found: here

2. AI4Copernicus Project Overview

2.1 AI4Copernicus overview

Delivering 12 TB of space data per day, Copernicus is the world's largest space data provider. At the same time, Artificial Intelligence (AI) is becoming an indispensable and ubiquitous tool for growth and innovation. In this context, the EU-funded AI4Copernicus project will bridge the EU AI on-demand platform AI4EU with Copernicus Data and Information Access Services (DIAS) platforms to allow innovative players break new ground.

AI4Copernicus is an EU-funded (H2020) project which aims to enable innovation by bringing together the AI (Artificial Intelligence) and EO (Earth Observation) communities. AI4Copernicus will provide the appropriate platform of choice for users of Copernicus data along the value chain (AI4EU scientists, SMEs, non-tech sector), bringing together the knowledge, algorithms, tools and resources available in domains of high economic and societal impact, such as in Agriculture, Energy and Security.

Involving 11 partners from seven different countries, the AI4Copernicus project started in January 2021 and it will run for three years. By bridging the gap between AI-driven and data-driven EO innovation and linking leading European ecosystems, such as AI4EU and Earth Observation, Copernicus and DIASes; AI4Copernicus aims to create sustainable, cutting edge applications in domains of high economic, societal and environmental impact, such as in Agriculture, Energy, Environment and Security among others. AI4Copernicus will harness the full power of new technologies such as AI and EO big data, and in collaboration with industrial players in the ecosystem such as ICT companies, startups, it will facilitate the co-creation of value and the provision of actionable insights and policy recommendations for European economic and political decision makers of EO data.

AI4Copernicus will enable AI and Earth Observation innovation by implementing a series of four open calls, leading to 8 small-scale experiments (smaller, single-beneficiary experimental projects targeting technology-advanced users) and 9 use-cases (larger- budget project, involving at least one non-technology user) and 2 citizen-driven social challenges.

Through your participation in the open-calls, you will have the chance to join AI4Copernicus Community and communicate your needs and expectations which will help us to improve the provided services of AI4Copernicus platform. Key information regarding AI4Copernicus project, open calls and all documents needed, you could find in our:

AI4Copernicus website: https://ai4copernicus-project.eu/
Open Calls related information: https://ai4copernicus-project.eu/open-call-info/

2.2 Open Calls Overview

The open calls will necessitate the utilisation of DIAS platforms, Copernicus data, the AI4EU platform and the services and resources that will be provided by the AI4Copernicus project. Through organising, facilitating and mentoring these Open Calls, AI4Copernicus will reach out to new user domains and boost the use of the AI4EU platform. More specifically, AI4Copernicus aims to: (i) expand and deepen the integration of AI4EU with DIAS platforms to enrich the AI4EU services offering and enable far-reaching innovation; (ii) Kickstart the innovation cycle by incentivising diverse AI4EU and Copernicus communities to solve real problems of business and societal value; and (iii) Drive the evolution, uptake, and impact of all involved platforms: AI4EU and the DIAS (Data and Information Access Service) platforms, especially WEkEO, CREODIAS and MUNDI.

Additional Open Calls related information

2.2.1 What do we offer?

AI4Copernicus will run four different rounds of open calls addressed to different target groups and collect various use cases and small scales experiments across diverse thematic areas and social causes.

Selected beneficiaries (SMEs, Start-Ups, companies, and citizens), will enter the support

program and receive:

- funding (depending to the type of the call) to implement their project for a period of 16 months
- AI4Copernicus resources & tools
- Technical mentoring from an expert in the field of their project's domain
- Business & Sustainability Mentoring
- Certification: AI4Copernicus Trustmark
- Visibility through AI4Copernicus digital channels and events as AI4Copernicus Ambassadors

2.2.2 Eligible countries

Only the organization registered in any of eligible countries - EU member states, Associated Countries (hereafter collectively identified as the 'Eligible Countries') or UK will be eligible to participate in the AI4Copernicus Support Program to address the Challenge.

Please find the list of Associated Countries here.

2.2.3 Points of Contact

All the information needed will be provided to applicants via the following digital channels:

Project's website (more info):https://ai4copernicus-project.eu/

Apply via: https://ai4copernicus-project.eu/open-call-info/

AI4Copernicus Support team: info@ai4copernicus-project.eu

2.2.4 What are we looking for?

AI4Copernicus is looking for **AI Solutions based on AI technologies and Earth Observation Data**, utilising AI4EU, AI4Copernicus services and DIAS Services.

The Ideal Project

The ideal project is an AI Solution based on AI technologies, where the scenarios demonstrate the reusability and effectiveness value of the resources and services brought by AU4Copernicus, while they also cover the four high impact value areas of the first wave of open calls (Security, Agriculture, Health and Energy).

Applicants should be technology providers and their use cases to be addressed to people

involved in the fields of industry and research, being government's employees or just being citizens.

Please note that the **Indicative Open Call Scenarios** are included in detail in **Annex 2.1**.

2.2.5 Who are we looking for?

We are looking for the following applicants:

- Small and medium-sized enterprises (SMEs)
- Start-Ups
- Entrepreneurs

2.2.6 Any Requirements for the 1st Round of Open Calls?

Consortia projects (with min 2 partners and max 3 partners) have to include a non tech partner by default. The max funding per project:

- up to €150.000 (3-partner consortia),
- up to € 120.000€ (2-partner consortia)

Preparatory activities

If you want to participate in the AI4Copernicus Open Call for proposals (Use-cases and/or Experiments), your organisation needs to be registered and have a **9-digit Participant Identification Code (PIC)**. Please quote your PIC and your partner PIC in the proposal template.

Additional information about the PIC number can be found here.

2.2.7 AI4Copernicus committed to diversity and inclusion

AI4Copernicus is committed to diversity and inclusion, and encourages all candidates, irrespective of gender, nationality, religious and ethnic backgrounds, including persons living with disabilities, to apply to become a part of the project.

3. AI4Copernicus Services

AI4Copernicus offers high-level AI services on high-impact domains that could be potentially exploited by other actions of the EC, such as the SETIS system that is implemented in the context of European Green Deal or The Rapid Action on coronavirus and EO, a new platform resulting from the cooperation of ESA and the EC, which demonstrates how EO data can help tackle societal and economic challenges due to COVID-19 pandemic. The AI4Copernicus platform will provide a semantic catalogue that will assist in semantic search and discovery in the platform. The platform will be built using existing solutions operating as part of the WEkEO and CREODIAS tools. The first available configuration will be based on the existing OpenStack CloudFerro cloud with access to Copernicus data available in the CREODIAS repository.

Additional information about the AI4 Copernicus Services

4. AI4EU Services

AI4EU is an emblematic European initiative with the main objective to deliver a high-impact Artificial Intelligence (AI) -enabling on-demand computing platform. The AI4EU AI-on-demand platform is designed to provide a broad range of AI services, data and algorithms to innovators and researchers in Europe. The AI4EU platform services cover statistical and symbolic AI approaches as well as different representational and referential mechanisms (e.g., Semantic Web) and facilitates their exploitation in a number of diverse societal and business domains.

4.1. AI Resources Catalogue/Repository

The AI4EU Resources Catalogue is the central service for discovering, understanding and acquiring models, tools, data and services for building AI-driven solutions for different domains and use cases. It aspires to provide a comprehensive yet clear overview for a resource and direct the interested users to its incorporation and usage in their products. AI4Copernicus, via its open calls' strategy, will strive to make the final products and by-products of the winning open calls projects available for reuse through the AI4EU resource catalogue. It will therefore enforce its service layer, make it available to additional communities and ultimately reinforce its sustainability.

4.2. Experimentation Service

The AI4EU experiments service enables the visual creation and configuration of complex AI workflows that combine different building blocks (data sources, models and services) in a complete solution. The produced workflows are – as any other resource – describable and publishable in the AI4EU platform. Instantiations of the experimentation service will be deployed and configured especially for usage with Copernicus data and over the services provided by the AI4Copernicus DIASes. Using the service, open call participants can build and test their products, and subsequently publish them for reuse in different solutions and for different application domains.

5. DIAS services

DIAS ([Data and Information Access Services](#)) facilitate and standardise access to Copernicus data. The European Commission has funded the deployment of five cloud-based platforms (WEkEO, CREODIAS, MUNDI, SOBLOO, ONDA). These platforms provide centralised access to Copernicus data and information, as well as to processing tools.
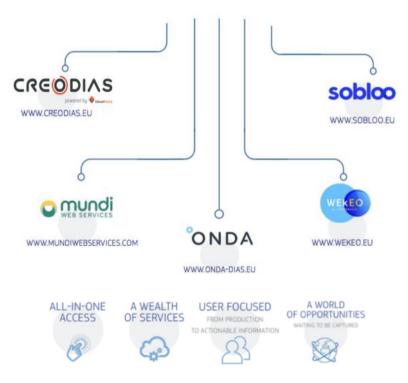

Figure 1: Data and Information Access Services (DIASes)

AI4Copernicus aims to enable Copernicus DIAS users to perform highly sophisticated operations on large and high-valued Copernicus datasets based on AI. To meet its objectives, AI4Copernicus will operate on three levels:

1. It will generate added-value bootstrapping services and resources.
   a. Generic services optimising and possible extending existing AI4EU services
   b. Services and resources aimed at high-impact domains that routinely make use of EO data and services
2. It will facilitate the integration of AI4EU computational components on DIAS platforms in an extensible and reusable way
3. It will facilitate the extension of the AI4EU service catalogue in order to increase the impact, reach and sustainability of AI4EU as a platform and as an ecosystem

AI4Copernicus takes advantage of the existing DIAS platforms and tries to build it further on work taking place within the AI4EU project, in the framework of its effort to bring the EO/Copernicus world closer to the AI on-demand platform. Part of its effort is to extend and improve integration with MUNDI to other DIAS platforms, namely CREODIAS and WEkEO.

AI4Copernicus will allow users of EO data to develop, publish and reuse EO-specific AI components, while at the same time allowing them to use tools they are familiar with. Debugging can be easier since AI4Copernicus will enable the use of higher-level AI4EU tools within the DIAS environments.

*Please note additional information about the development environment can be found in **Appendix 2.2: Technical Documentation & Appendix 1.***

6. 1st Round of Open Calls for Use-cases in Health, Energy, Security & Agriculture

AI4Copernicus 1st Round of Open Calls are looking for projects dedicated for developing, testing and validating the technical solutions of AI that address **industrial challenges** by exploiting AI resources and Earth Observation Data focusing only in f**our industrial domains:**

Health, Security, Energy & Agriculture

Selected beneficiaries (SMEs & Start-Ups, including a non tech partner by default) will enter the support program and receive:

- 900.000 euro in total (up to €150.000 (3-partner consortia), up to € 120.000€ (2-partner consortia)
- AI4Copernicus tools and resources
- Technical Mentoring from an expert in the field of their project's domain
- Business and sustainability mentoring from experts in the area
- Visibility through AI4Copernicus digital channels and events as AI4Copernicus Funded projects

6.1 1st Open Call Overview

AI4Copernicus aims to bridge the gap between AI- & data-driven innovation and providing economic, social & environmental benefits. Towards this aim it will create an open, inclusive and sustainable "AI-EO innovation cycle" via a series of open calls.

The first round of open calls targets consortia of companies (SMEs & Start-Ups including a non tech partner by default) active in the areas of Health, Security, Energy & Agriculture.
Up to 900.000 euro (up to €150.000 (3-partner consortia), up to € 120.000€ (2-partner consortia) will be distributed among consortia for a period of 16 month support projects to develop prototypes based on AI resources in specific areas. AI4Copernicus will provide mentoring to the funded projects from top experts and entrepreneurs in the field of AI and EO.

Important Dates

- **Expected Publishing Date: 30th of June 2021**
- **Submission deadline: 30th of September 2021**
- **Expected Selection Date: December 2021**

Who can Apply

Consortia projects (SMEs & Start-Ups) including a non tech partner by default.Up to six projects will be funded in the field of Health, Security, Energy & Agriculture

9

Duration 16 months (January 2022 - April 2023)

How to apply

The applicants should submit their application forms via the **AI4 Copernicus Open Call Platform (https://ai4copernicus-project.eu/open-call-info/)**

Preparatory activities

If you want to participate in the AI4Copernicus Open Call for proposals (Use-cases and/or Experiments), your organisation needs to be registered and have a **9-digit Participant Identification Code (PIC)**. Please quote your PIC and your partner PIC in the proposal template.

Additional information about the PIC number can be found here.

6.2 Announcement of the 1st Round of Open Calls for Use-Cases

An overview of the 1st Round of AI4 Copernicus Open Calls for Uses-Cases in Health, Energy, Security and Agriculture.

Call Title	1st Round of AI4 Copernicus Open Calls for Uses-Cases in Health, Energy, Security and Agriculture
EU-Funded project full name	Reinforcing the AI4EU Platform by Advancing Earth Observation Intelligence, Innovation and Adoption
Project Acronym	AI4 Copernicus
Grant Agreement Number	101016798
Call Publication Date	30th of June 2021
Submission Deadline	30th September 2021
Sub-contract Signature Date	December 2021

AI4Copernicus Support Programme/Acceleration	16 months
No. of Assessments in the course of the Funded Projects	2 Assessments: (a) Interim, and (b) Final Assessments
AI4Copernicus Trustmark	All selected projects that have successfully completed the Final Assessment will be awarded with the "AI4 Copernicus Trustmark"
Total EU Funding Available for the 1st Round of Open Calls for Use-Cases	900,000€ (in total)
Max Funding per project	up to €150.000 (3-partner consortia), up to € 120.000€ (2-partner consortia)
Max Number of projects to be funded	6 projects
Types of Projects	**Use-Cases:** Consortia project with 2 or more partners including a non-tech/low-tech partner by default
TRL:	Min TRL 5[1]
Submission Process	The applicants should submit their application forms via the **AI4Copernicus Open Call Platform**
Evaluation Process	Multi-criteria initial evaluation

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[1] Technology Readiness Levels (TRL) – A scale ranging from TRL 1 to TRL 9. AI4Copernicus 1st Round of Open Calls will focus on "Technology Demonstrations" TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies) https://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-g-trl_en.pdf

Eligibility Criteria	7 Eligibility Criteria
Further Information	Details available at: https://ai4copernicus-project.eu/open-call-info/

Do you have any questions?

If yes, please let us know

info@ai4copernicus-project.eu

Appendix 1: Open Call Text

Announcement of the
AI4Copernicus 1st Round Open Calls

Deadline: 30th of September 2021

Project Title: Reinforcing the AI4EU Platform by Advancing Earth Observation Intelligence, Innovation and Adoption

Project Acronym: AI4Copernicus [Grant Agreement number: 101016798]

Opening date: 30 June 2021

Deadline: 30 September 2021 - 17:00 CEST

Expected duration of participation: 16 months

Total available EU funding: €900.000   **Funding rate**: 100%

Max funding per project: up to €150.000 (3-partner consortia), up to € 120.000€ (2-partner consortia)

Submission & evaluation process: Detailed information about the 1st AI4Copernicus Open Call for SME consortia can be found on the https://ai4copernicus-project.eu/open-call-info/

Submission Language: English

Project Website: https://ai4copernicus-project.eu/   **Contact Email:** info@ai4copernicus-project.eu

Task description

AI4Copernicus aims to bridge the gap between AI- & data-driven innovation and providing economic, social & environmental benefits. Towards this aim it will create an open, inclusive and sustainable "AI-EO innovation cycle" via a series of open calls.

Who can apply?

13

Consortia projects (SMEs & Start-Ups) including a non-tech/low-tech partner by default. **Up to 6 projects** will be funded in the field of Health, Security, Energy & Agriculture.

What kind of project are we looking for?

AI4Copernicus is looking for **AI Solutions based on AI technologies and Earth Observation Data**, utilizing AI4EU, AI4Copernicus services and DIAS Services across 4 Industrial Domains: Health, Security, Energy & Agriculture.

Apply here

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OPEN CALLS
find more information at ai4copernicus-project.eu