



EU**CloudEdgeIoT**.eu



EU CEI OPEN CALLS BROCHURE

MetaOS Cluster 1st Round 2023-2024

Open 1st October 2023

Close 31st January 2024

Value 60.000€

Duration Max. 9 Months

Number of Grants 7

Funded actions

Small projects that validate aerOS architecture and focus on one of our use cases

Eligible Organisations

- » SMEs
- » RTOs & Academia
- » Individuals

No large companies allowed

Open Calls Coordinator Contact

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Link to Open Calls Page

[https://aeros-project.eu/
open-calls/open-call-1/](https://aeros-project.eu/open-calls/open-call-1/)

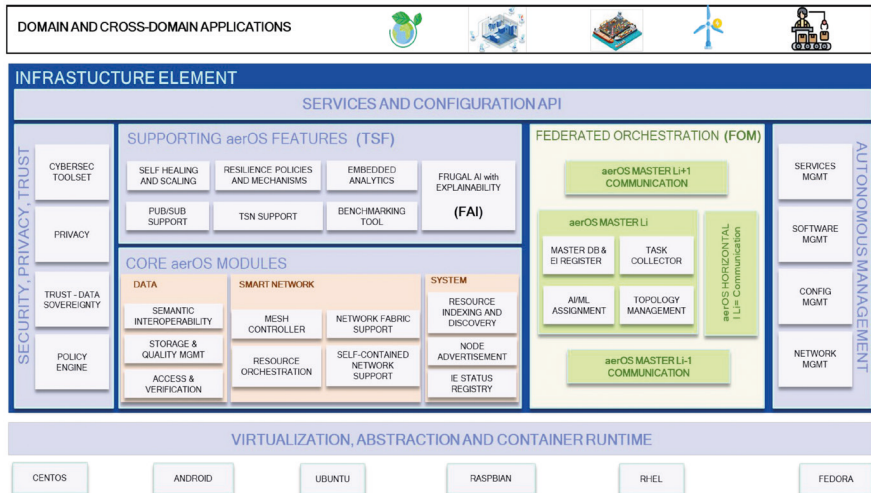
Evaluation Process

- » **31st January – 31st March 2024**: 2-month evaluation phase; pre-screening > scoring > ranking
- » 2 independent reviewers per proposal and 1 external ethical observer
- » Scoring from 1-25
- » Criteria will be published in the Guidelines for Applicants
- » Min. threshold: 19

Key Use Cases

- » Data-Driven Cognitive Production Line
 - » Containerised Edge Computing Near Renewable Energy Sources
 - » HPC for Agricultural Machinery
 - » Smart Edge Services for the Port Continuum
 - » Energy Efficient, Health Safe & Sustainable Smart Buildings
- More info: <https://aeros-project.eu/use-cases/>

Components & Architecture





Open December 2023

Close February 2024

Value 75.000€

Duration 8 Months

Number of Grants 10

Funded actions

Technology Extension Grant (TEG) and Use Case Grant (UCG)

Eligible Organisations

- » TEG for individual entities (e.g. researchers, SMEs, start-ups)
- » UCG both individual entities or small consortia of 2-3 entities

Open Calls Coordinator Contact

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Link to Open Calls Page

<https://www.fluidos.eu/fluidos-open-call/>



Evaluation Process

- » Proposal evaluation process: ~ 1 month
- » External and project-based technical partner evaluations
 - » Open call for evaluators and selection
- » Blind review in three working days
- » Consensus meeting within three weeks of call closure

Key Use Cases

- » Intelligent power grid and real-time data processing
- » Smart viticulture for digitalization of vineyards
- » Robotic Logistics in Industry 4.0

More info: <https://www.fluidos.eu/>

Components & Architecture

FLUIDOS software implements the full Meta Operating System capabilities. Built on top of Kubernetes, FLUIDOS extends it with new control logic responsible for handling the different node to node interactions and advanced policies and intents.

2 main components: **Node Orchestrator** and **Available Resources database**.

The former orchestrates service requests, either on the local node or on remote nodes of the same fluid domain. The latter keeps up-to-date information about resources and services available either locally or acquired from remote nodes.



Open 28th August 2023

Close 2nd November 2023

Value 200.000€

Duration 12 Months

Number of Grants 5

Funded actions

ICOS solution development project: support programme

Eligible Organisations

- » SMEs
- » Midcaps

2 consortia members in total

Open Calls Coordinator Contact

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Link to Open Calls Page

<https://aeros-project.eu/open-calls/open-call-1/>

Evaluation Process

- » **December 2023:** First Admissibility and Eligibility Check/In-Out Scope
- » **January 2024:** External Evaluation/Consensus meeting
- » **February 2024:** Legal check / Specific Grant Agreement signing
- » **March 2024:** Support programme

Key Use Cases

- » Agriculture Operational Robotic Platform (AORP)
- » In-car Advanced Infotainment and Multimedia Management system (IAIMM)
- » Railway Structural Alert Monitoring system (RSAM)
- » Energy Management and Decision Support system (EMDS)

More info: <https://www.icos-project.eu/first-open-call>

-> Use Cases

Components & Architecture

- ICOS = meta operating system for a continuum
- » It has 4 main layers (Meta-Kernel Layer, the Intelligence Layer, the Security Layer, Data Management Layer) + additional module (ICOS Shell)
 - » ICOS project will embed a well-defined set of functionalities, ending up in the definition of an IoT2cloud Operating System (ICOS)

www.icos-project.eu/first-open-call -> Architecture White Paper



nebulous

Open

February 2024

Close

March 2024

Value

150.000€

Duration

7 Months

Number of Grants

4

Funded actions

Validation of basic aspects of the platform

Eligible Organisations

- » Micro & SMEs working on IoT, Edge, Cloud or and other related technologies
- » Research institutions, research infrastructures, non-profit organisations and charitable (scientific) foundations and public research centres when supporting organisations of category 1 in a collaborative 3rd party project

Open Calls Coordinator Contact

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Link to Open Calls Page

<https://www.nebulouscloud.eu/open-calls/>



nebulous

Evaluation Process

- » **April 2024:** First Admissibility, Eligibility Check/In-Out Scope and External Evaluation / Consensus meeting
- » **May 2024:** Selection and Legal check / Specific Grant Agreement signing
- » **June 2024:** Support programme

The applications will be handled via F6S platform (<https://www.f6s.com/>)

Key Use Cases

- » Agriculture: Precision agriculture
- » Transportation and logistics: Supply of Fresh Food to a City
- » Energy and utilities: Windmill Maintenance

- » Environment: Crisis Management
- » Smart City: Computer Vision for City Maintenance

More info: <https://www.nebulouscloud.eu/use-cases/>

Components & Architecture

NebulOUS is a meta Operating System that can seamlessly exploit edge, fog and multi-cloud shared resources while coping with low-latency applications. It consists of:

- » **Web GUI:** Facilitating
 - » i) devOps to deploy and monitor applications by providing services descriptions and requirements (SLO, security policies, hardware specifications, etc.)
 - » ii) admins to register computing power to be managed by NebulOUS.
- » **NebulOUS core:** Optimizing application placement across available resources, monitoring its behavior, and redeploying as necessary.
- » **NebulOUS Agent:** Installed in each computing node, responsible for deploying and monitoring client application components.



Open 1st September 2023

Close 30th November 2023

Value 150.000€

Duration 18 Months

Number of Grants 6

Funded actions

- » NEMO meta-architecture extensions
- » Implementation of SW components
- » Network/service/resources metering/automated control components
- » Port NEMO on new, heterogeneous IoT devices

Eligible Organisations

- SMEs active in:
- » Edge computing
 - » Edge and/or cloud native software development
 - » Operating systems
 - » IoT/5G networks
 - » IoT manufacturing

Open Calls Coordinator Contact

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Link to Open Calls Page

<https://meta-os.eu/index.php/open-calls/>

Evaluation Process

- » **1st December 2023 – 14th February 2024** – Evaluation & Selection
- » **15th February 2024 – 29th February 2024** – NEMO Sub-project contract
- » **1st March 2024** – Start of project

Key Use Cases

- » Smart Farming and Precision Agriculture
- » Smart Energy & Smart Mobility

- » Smart Manufacturing & Industry 4.0
- » Smart Media / City & XR

More info: <https://meta-os.eu/index.php/pilots/>

Components & Architecture

NEMO Architecture– Horizontal Layers

- » NEMO Service Management Layer
- » Plugins & Apps Lifecycle Manager
- » Monetization & Consensus-based Accountability
- » NEMO Kernel
 - » Meta-Orchestrator
 - » Intent-based Migration Controller
 - » Secure Execution Environment
 - » Cybersecure Microservices' Digital Twin

- » NEMO Infrastructure Management
- » Federated Meta Network Cluster Controller
- » IoT/5G resources control & Management

NEMO Architecture– Vertical Layers

- » Cybersecurity & Access Control
- » Data & Service Policy Compliance Enforcement
- » Cybersecure Federated MLOps

Open November 2023

Close January 2024

Value 76.000€

Duration 6 Months

Number of Grants 8

Funded actions

- » Development of Virtual Objects
- » Composite Virtual Objects (including the Digital Twin concept)
- » Generic IoT enablers

Eligible Organisations

Individual industrial entities such as SMEs (including startups) and midcaps

Open Calls Coordinator Contact

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