



*This Communication is part of a project that has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement N°101069732*



# aerOS Open Call #2

*06-September-2024*

- Introduction to aerOS Open Calls
- What is expected to be delivered?
- How to apply?
- Timing of aerOS Open Call #2



- Call and Topic: HORIZON-CL4-2021-DATA-01-05 Future European platforms for the Edge: Meta Operating Systems
- Type of project: RIA
- Total budget: 11,828,857.50 €
- Grant Agreement N°: 101069732
- Duration: Sep 2022– Ago 2025 (36 months)
- Project Coordinator: Carlos E. Palau Salvador (UPV)
- Field of action: Edge-cloud continuum, Frugal explainable AI, orchestration, virtualisation, networking, data governance and sovereignty, trustworthiness, decentralised computing
- N° partners: 27
  - *From 11 countries* : Spain, Poland, Greece, Germany, Finland, Cyprus, Romania, Italy, Austria, Ireland, Switzerland.
  - *Experts in every area* : edge-cloud research in academia, edge-cloud deployments in the industry, 5G, semantics, artificial intelligence, security, business, exploitation of results, communication service and infrastructure providers, stakeholders in manufacturing, agriculture machinery, maritime ports, energy production and telecom operators.



# Open Calls overview

- **Two** open calls to be conducted - A total of **900k€** will be distributed to external third parties.

	1 <sup>st</sup> Open Call Schedule		2 <sup>nd</sup> Open Call Schedule		
Sept-23	Announcement	M13	Announcement	M20	June-24 July-Sept 24 Sept-Nov 24 Dec 24 July/Aug 25
Oct-23 to Jan-24	Submission Phase	M14-M17	Submission Phase	M21-M24	
Feb-24 to Mar-24	Evaluation Phase	M18-M19	Evaluation Phase	M25-M26	
Apr-24	Start Participation	M20	Start Participation	M27	
Nov-24	End Participation	M27	End Participation	M34	

## What' s the focus of each round?

Round #1

(1) extension of functionalities delivered by aerOS, (2) expansion of application of aerOS in the five use case verticals considered in the project

Round #2

(3) application of aerOS to verticals outside of these considered in the project

- Expected ~15 contributions (max.7 in the first, and min. 8 in the second) will be selected.
- Each open call will be funded with a maximum of **60k€ (fixed, lump-sum)**.
- In the first round, each open call funded proposal will have to focus **on one out of the five pilots**.
- In the second round, target is to tackle other sectors and scenarios (not covered in aerOS) focused **on uptake and upscale of aerOS**
- Eligible entities: SMEs, RTOs and individuals (**no large companies**).

# Topics of the webinar

- Introduction to aerOS Open Calls
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# What are you expected to address?

The **proposers** will have to:

- Be individuals, SMEs, Universities or Research Centres.
- **Propose a project of 8 months** (fixed duration).
- Prepare a [proposal following the Guidelines](#)
  - Online form
  - Possibility of adding an extra file

Two mandatory conditions:

1. Targets a new sector (for aerOS)

... and ...

2. Ensure uptake/upscale aerOS meta OS

**Uptake:** Proper adoption of the metaOS, using it for the designed purposes or extended/customising functionalities tailored to the specific project

**Upscale:** Demonstrate in larger scenarios, for more stakeholders, with more mature TRLs or including new technologies that were not expected in aerOS initially (e.g., blockchain, GenAI, quantum computation, adversarial AI security...)

The activities called upon will be **open technological target**:

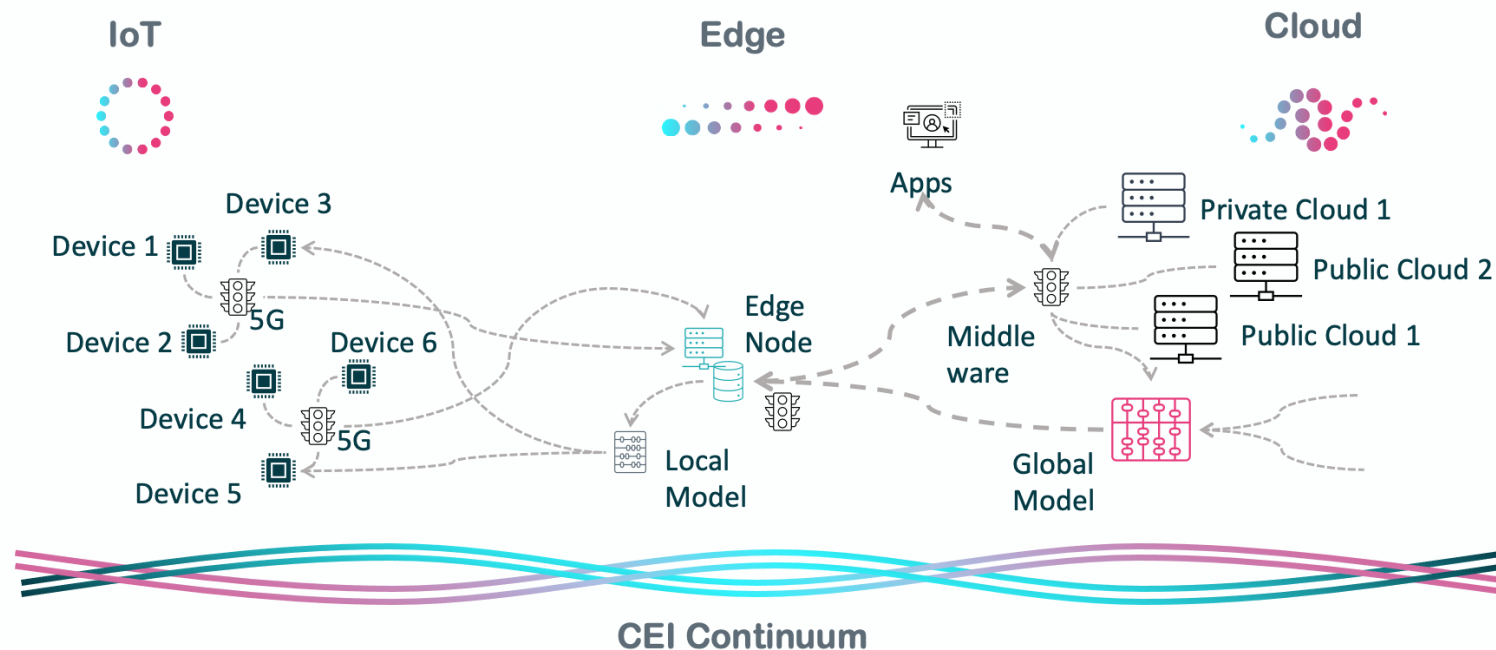
- Containerised modules for supporting distributed mechanisms/functionalities in the continuum
- AI/ML libraries and tools to be integrated in aerOS meta-OS, virtualized networking layer components to enlarge aerOS validation
- New smart data and semantics components related to trust, aggregation, security or any sovereignty realm feature
- Innovative usage of aerOS orchestrator to demonstrate further efficiency, network throughput, analytics capabilities or other relevant improvements
- Developing and using aerOS self-\* functions including self-adaptation and self-healing of the Infrastructure Elements
- Development of Digital Twin solution profiting aerOS deployment in the IoT-edge-cloud continuum

# CLOUD-EDGE-IOT CONTINUUM OVERVIEW



## Technological Scope

- Creation of the CEI paradigm as a result of the convergence across the whole digital spectrum driven by the advancement in technologies
- Changing landscape due to the development within the Edge Computing ecosystem, increase in intelligent devices, processing needs and data produced



Source: UNLOCK-CEI D4.1, Technology scoping paper

# Understanding aerOS architecture - overview

Infrastructure Element (IE)

Orchestration

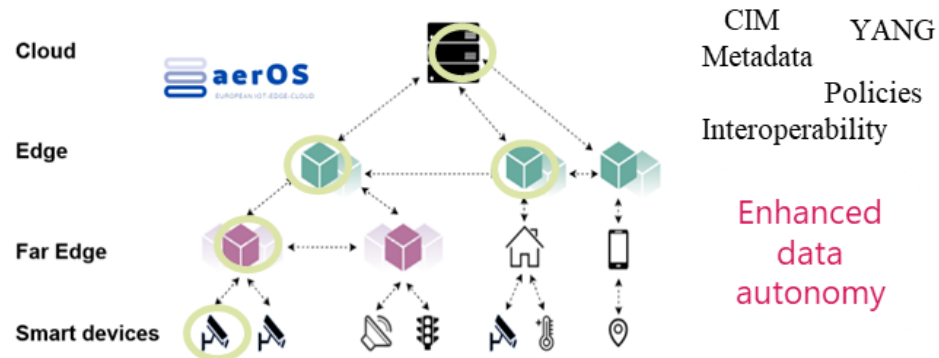
Zero touch, automated (AI-powered), in a heterogeneous continuum of resource federation

Cloud-native-like by design, everywhere

Containerisation  
Virtualisation  
Dynamic deployment  
Reconfiguration  
Applicability

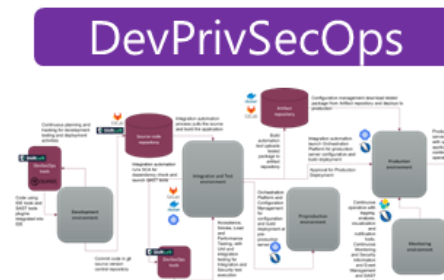
on resource constrained devices going beyond current cloud federated AI/ML FWs

Frugal XAI (FAI)



CIM Metadata Interoperability  
YANG Policies Interoperability

Enhanced data autonomy



- Docker
- Kubernetes
- KubeEdge
- NGSI-LD
- KrakenD
- FIWARE
- KeyCloak
- IOTA
- Prometheus
- PowerTOP
- Cilium
- OpenAPI
- DCAT
- Kopf
- Helm
- Suricata
- ...

Reference documents:

- [D2.6 – aerOS architecture definition](#)
- [D3.2 – Intermediate distributed compute infrastructure specification and implementation](#)
- [D4.2 - Software for delivering intelligence at the edge preliminary release](#)







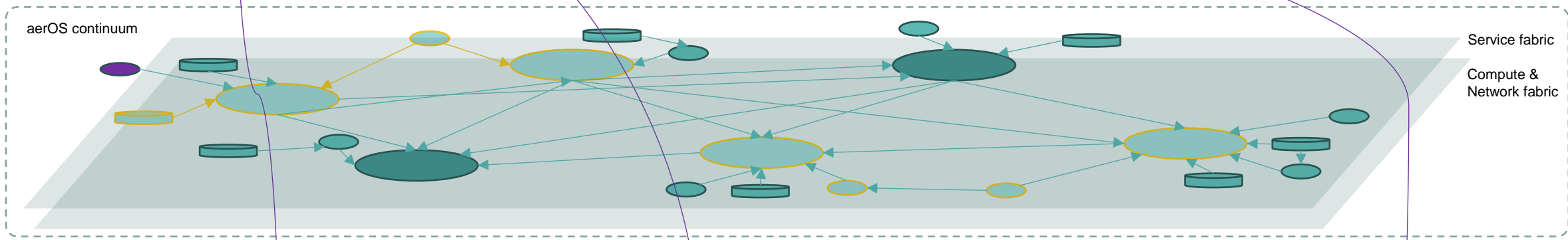
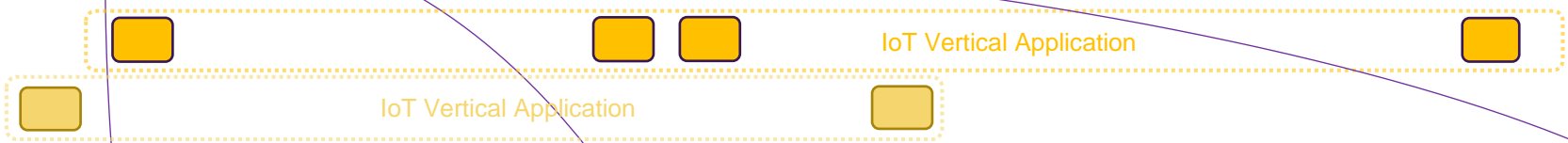
aerOS vertical IoT service  
 aerOS vertical IoT service  
 aerOS vertical IoT service

# aerOS HLA (High Level Architecture)

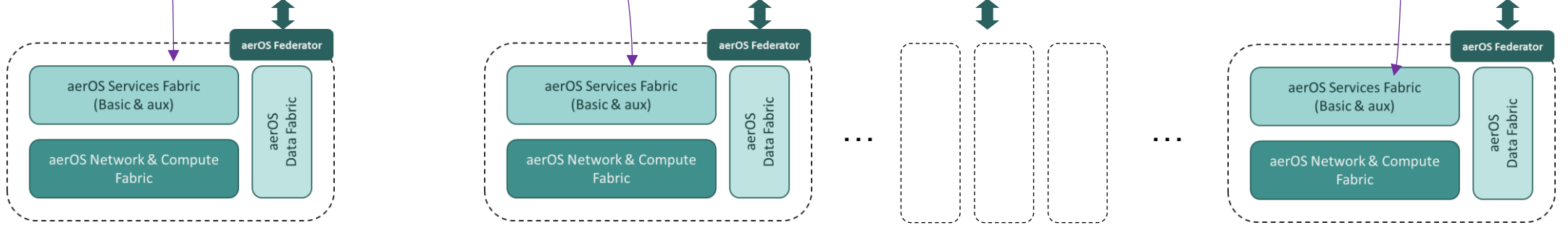


"aerOS Entrypoint Domain"

Entrypoint Balancer



aerOS Federation



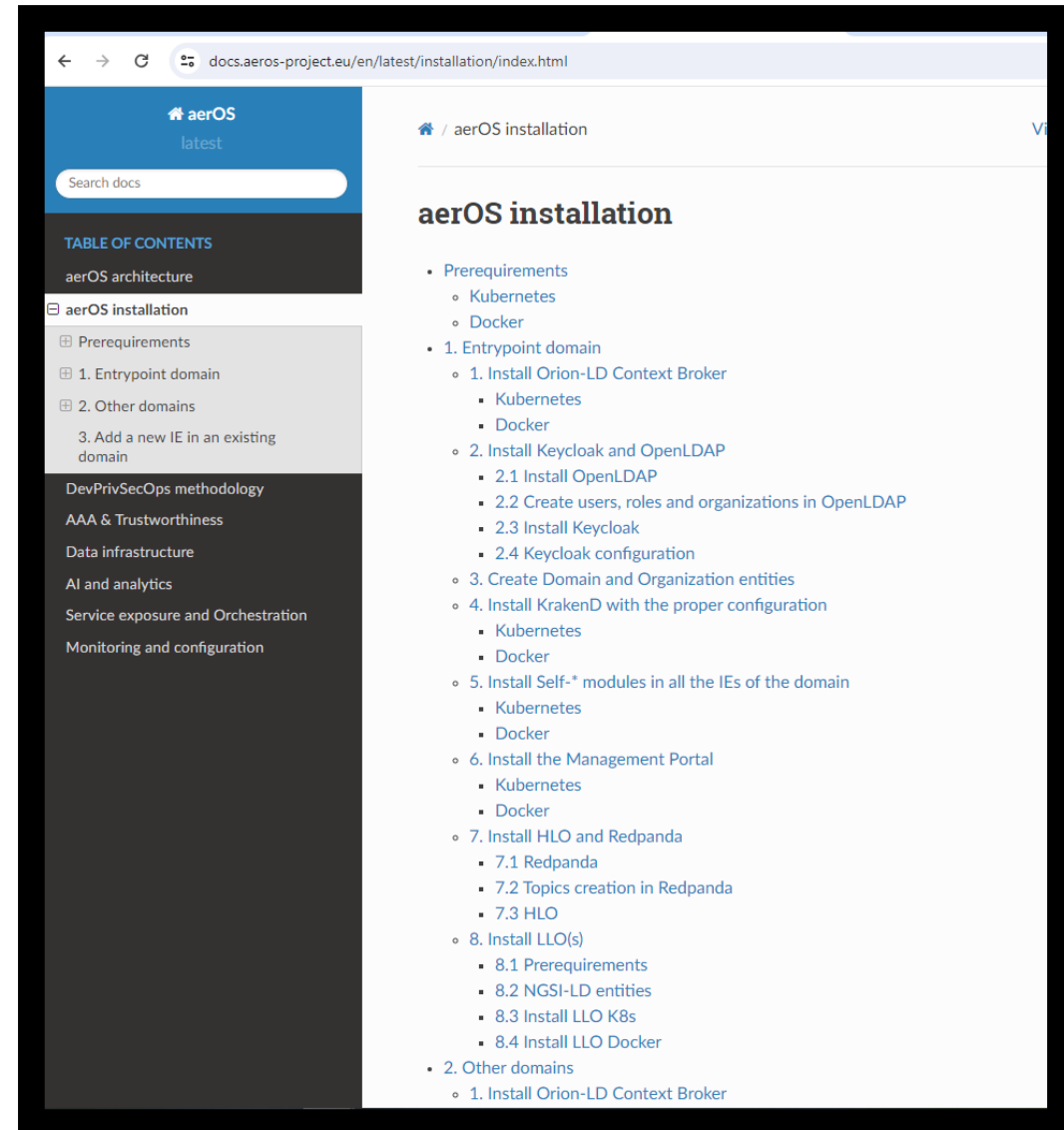
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aerOS project

# Technical documentation to consult

- Documentation of aerOS software results
- <https://docs.aeros-project.eu>
- Data Model of a CEI Continuum
- <https://wp4.pages.aeros-project.eu/t4.1/aeros-continuum/>
- aerOS Installation Guide
- <https://gitlab.aeros-project.eu/aeros-public/installation-guide>
- aerOS Public packages and registries
- <https://gitlab.aeros-project.eu/aeros-public/>



The screenshot shows a web browser displaying the aerOS installation documentation page. The URL is docs.aeros-project.eu/en/latest/installation/index.html. The page features a blue header with the aerOS logo and a search bar. A table of contents is visible on the left, listing sections like 'aerOS architecture', 'aerOS installation', 'DevPrivSecOps methodology', 'AAA & Trustworthiness', 'Data infrastructure', 'AI and analytics', 'Service exposure and Orchestration', and 'Monitoring and configuration'. The main content area is titled 'aerOS installation' and contains a list of prerequisites and a numbered list of installation steps, including '1. Entrypoint domain' and '2. Other domains'.

# Topics of the webinar

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# How to get the proper information?

<https://aeros-project.eu/open-call-2/>

<https://aeros-project.eu/wp-content/uploads/2024/08/aerOS-OC2-GUIDE-APPL-v3.pdf>

## Open Call Information Summary

**2nd Open Call budget:** € 480'000 – A maximum of 8 projects are expected to be selected and funded.

**Project budget range:** € 60'000.00 maximum

**Opening date:** 25th July 2024

**Closing date:** 30th September 2024 at 17:00 CET

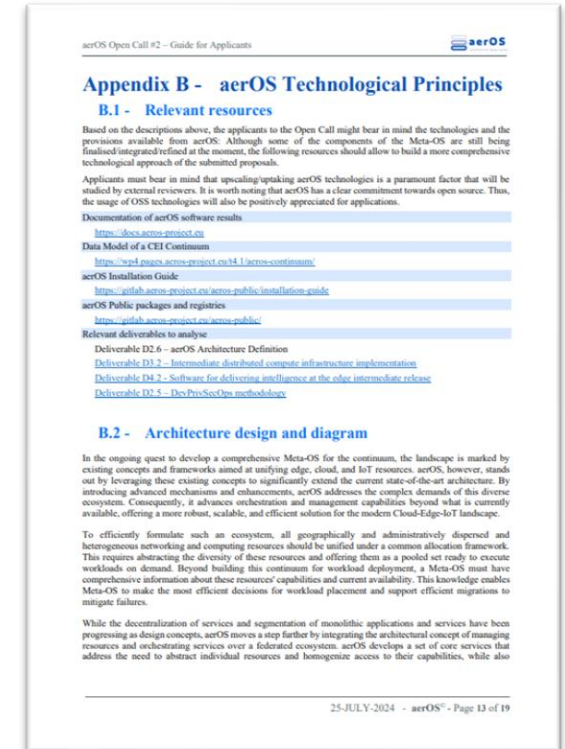
**Contact person:** Ignacio Lacalle Úbeda (Universitat Politècnica de València – UPV)

**Email:** [opencall-aeros-project-eu@aeros-project.eu](mailto:opencall-aeros-project-eu@aeros-project.eu)

**Phone:** +34963877000

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

- FAQ#1: What is aerOS?
- FAQ#2: What is aerOS Open Call #2?
- FAQ#3: Could I apply to aerOS Open Calls?
- FAQ#4: How could I apply to the funding?
- FAQ#5: Is there a checklist of steps to be conducted?
- FAQ#6: Which activities qualify for financial support?
- FAQ#7: How many applications could I submit?
- FAQ#8: Which are the evaluation criteria that will be applied?
- FAQ#9: How would I be joining the project?
- FAQ#10: How amount of funding can be requested and which are the eligible costs?
- FAQ#11: Which should be the duration of the project?
- FAQ#12: When will I find out whether the proposal has been accepted?
- FAQ#13: Could I be eligible for the 2nd round of Open Calls if I have already received funding in the first round of Open Calls?
- FAQ#14: Which will be the differences between Open Call #1 and Open Call #2?
- FAQ#15: Who can I contact to get more information about the Open Call?



Check the template for the Agreement (contract that would be signed)

Guide for Applicants

Online Form

Collaboration Agreement



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# Submission (1): fulfilling the form

Guide for Applicants

Online Form

Collaboration Agreement

<https://opencall.aeros-project.eu/author/submit.php>

### aerOS OpenConf

OpenConf Peer Review and Submission Management System

[OpenConf Home](#) [Privacy Policy](#) [Email Chair](#)

## Submission

#### General Information

Acronym:

Title of the project:

#### Company Information

*Add information about the submitting company and about the contact person (name and email)*

##### Author 1

Company name:

Company Type:

Country:

PIC (optional):

Website:

First Name:

Last Name:

Email:

In the next box, the “Author 1” option of the dropdown list must be selected. This is a mandatory step.

#### Contact Person

Contact Person:

*Person who will serve as the point of contact for correspondence about the submission.*

Alternate Contact:

*Alternate contact information, such as personal email address or telephone number; used only if unable to contact using above email address.*

In the next box, the applicant must introduce a password for their submission (free selection). This is a mandatory step. It is **important to note it down**, as it will be required later to upload the PDF file.

#### Password

*Please enter a password you will remember. The submission ID, which you will receive via email upon submission of this form, along with this password will allow you to upload the PDF associated to this submission.*

Password:

Re-enter Password:

# Submission (1): fulfilling the form

Answer the boxes correspondingly (information about the expected content is included in green letters):

**Excellence**

**Innovative idea and relation with aerOS technology:** Max. 5000 chars  
Which is the main idea of the project and which sector it is expected to influence? How does the project go beyond currently existing solutions? How does the technology of the project interact with aerOS Meta-OS? How does it validate and help uptaking/upscaling aerOS technology?

**Expected results:** Max. 2500 chars

Which are the expected outcomes and results of the project? Are those enough substantiated? Is the output TRL clear enough? Which is the illustrative process depicting the expected improvements/developments in the project?

**Previous background, IP and departing solution:** Max. 3000 chars

Which is the product/technology underlying the project? Is there any IP background existing that should be noted?

**Impact and Sustainability**

**Increase of uptake/upscale of aerOS:** Max. 2000 chars  
How will the project contribute to aerOS upscale and adoption? Which are the expected actions to foster the uptake of open source technologies?

**Scientific outreach and KPIs:** Max. 2000 chars

Which is the expected impact of the solution during aerOS project? Explain every expected publication (scientific paper, congress article, etc.). Which are the mid- and long-term indicators that could be monitored to measure the impact of your solution? Attempt to quantify such estimated impact

**Previous background, IP and departing solution:** Max. 4000 chars

How will you ensure the sustainability of the work beyond the end of the funding? Please indicate any additional sources of funding/support you may need and how you plan to secure it. Which is the exploitation and commercialization strategy behind the product? Standardisation and roll-out potential

**Implementation workplan**

**Workplan explanation:** Max. 5000 chars  
Is the Gantt plan adjusted to 8 months and is the diagram properly included in the attached PDF? Is the implementation feasible and viable in a short timespan? Is the work properly separated by knowledge domains and activities?

**Technologies, methodologies, milestones and control of the advance:** Max. 1000 chars

Is there a structure of the control in the advances, and a solid timing for deliveries to accomplish the objectives? Is this well aligned with the timing of expected technical checks to be performed by aerOS Coordination? (Month K1+, M6+ and M8+)? Is any additionally necessary means to realise the idea properly described (GIS, equipment, connectivity, access to infrastructure, systems, etc.)?

**Team and Company**

**The Company:** Max. 2500 chars  
Is the experience of the organisation (relevant previous projects, services, contracts, etc.) included? Which is the experience and specialization of your company? Cite products, projects and previous research and transfer experiences.

**The Team:** Max. 2500 chars

Are all the relevant members of your team properly listed, indicating gender (voluntarily), their relevant skills and experience? Is the rationale of the structure of the team and the roles and responsibilities that each member will be taking well described?

The evaluation criteria will be:

- Relevance to aerOS (min. 3 out of 5)
- Impact and sustainability (min. 4 out of 5)
- Technical Excellence (min. 4 out of 5)
- Quality of implementation (min. 4 out of 5)
- Quality of the team (min. 4 out of 5)

• **If you need help in understanding the boxes, the required content or the challenges from pilots, do not hesitate to reach out:**

- [opencall-aeros-project-eu@aeros-project.eu](mailto:opencall-aeros-project-eu@aeros-project.eu)

• **And to attend next week Webinar!!!**



# Submission (1): fulfilling the form

IMPORTANT!! It is mandatory to accept (consent) the Ethics and GDPR clauses that are exposed at the end of the webpage.

## Consent

Consent:  I consent to the ethics and GDPR disclosure included at the end of this page

To finalize the submission, press: “Make Submission” button:

*Please check over your entries, making sure everything is filled out. When ready, click on the Make Submission button below once.*

Make Submission

### Ethics guidelines

The aerOS is to comply with the ethical standards in its operation. The project’s ethics manual guides the actions to accommodate participants a  
The ethical issues are vital to be followed by all the participants in the project throughout its whole lifecycle- before, during, but also after the pi

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Once the proposal is submitted, **keep the registration number!!**

aerOS OpenConf

OpenConf Peer Review and Submission Management System

[OpenConf Home](#) [Privacy Policy](#) [Email Chair](#)

**Submission**

Thank you for your submission. Your submission ID number is **119**. Please write this number down and include it in any communications with us.

Below is the information submitted. We have also emailed a copy to the submission contact. If you notice any problems or do not receive the email within 24 hours, please contact us.

**Submission ID: 119**

Consent: I consent HEEEEYs to the collection and use of my personal information, including receiving emails, consistent with the Privacy Policy linked above. I have also obtained the consent of all other individuals whose information I provide.

Title: adfadsfa

Author 1:  
First Name: adsfsa  
Last Name: asdfs  
Organization: asdfs  
Country: Andorra  
Email: iglaub@upv.es

Contact Author: Author 1

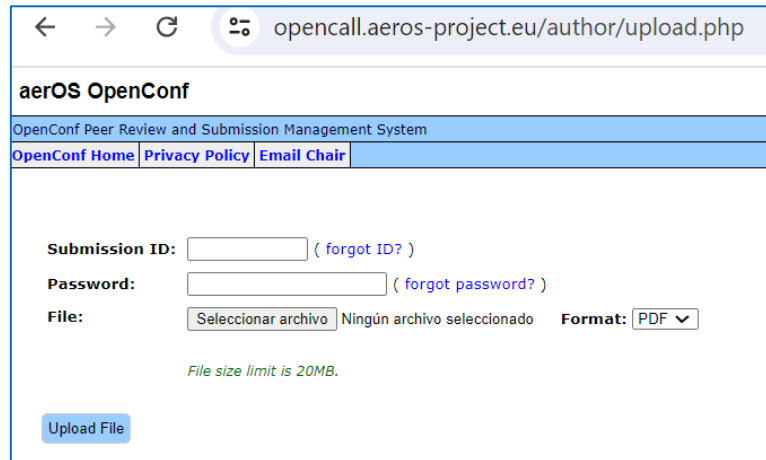
Alternate Contact:





# Submission (2): [optional] Accompanying file

In order to finalise the submission, another functionality of the tool **can** be used. As indicated in the guidelines for applicants, the Submission Form can be accompanied with a PDF composed of maximum 9 pages (minimum font size: 10,5 pts) including, maximum, 3 diagrams (incl. mandatory Gantt chart) to aid proposal reviewers in their evaluations. Please, find below an example of usage of the tool in: <https://opencall.aeros-project.eu/author/upload.php> . **The narrative text in the PDF must coincide to the letter with the information introduced in the form**



The screenshot shows a web browser window with the URL `opencall.aeros-project.eu/author/upload.php`. The page title is "aerOS OpenConf" and the subtitle is "OpenConf Peer Review and Submission Management System". There are navigation links for "OpenConf Home", "Privacy Policy", and "Email Chair". The main form contains the following fields:

- Submission ID:  ( forgot ID? )
- Password:  ( forgot password? )
- File:  Ningún archivo seleccionado
- Format:

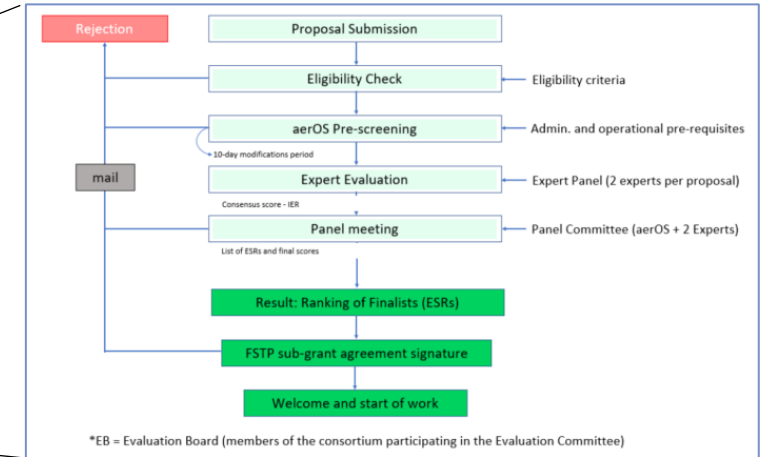
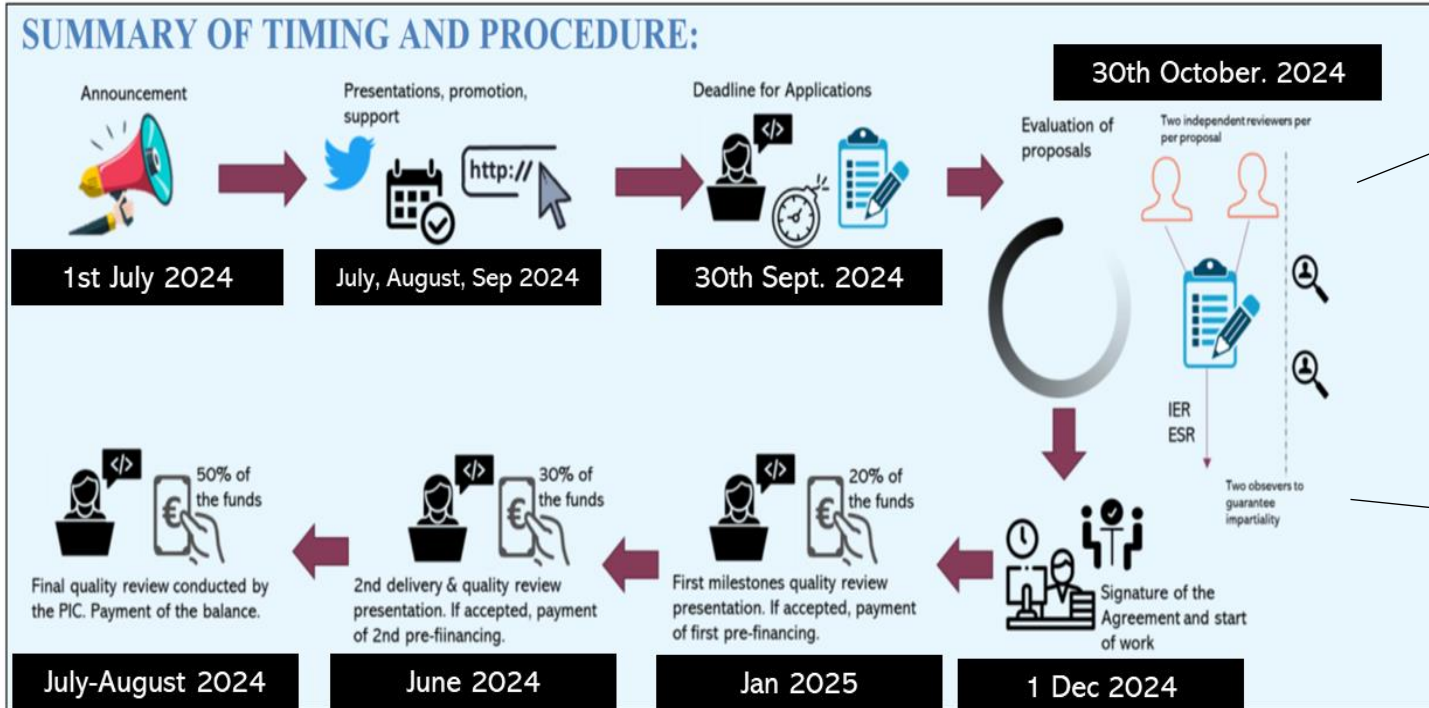
Below the fields, it states "File size limit is 20MB." and there is an "Upload File" button.

- Submission ID: The number obtained in the output provided as a result of successful completion of previous step.
- Password: The password introduced by the applicant in the corresponding cell of Submission Form.
- File: PDF file with max. of 3 diagrams.

# Topics of the webinar

- Introduction to aerOS Open Calls
- What is expected to be delivered?
- How to apply?
- Timing of aerOS Open Call #2

# Timing of aerOS Open Call #2



- Opening of Open Call application submission window: July 25th, 2024
- Closing of Open Call submission = Deadline for applications: **September 30th, 2024**
- Communication of the results: November 15th, 2024
- Expected start of action: 1st December 2024
- Expected end of action: 31st July 2024



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# THANK YOU!

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