



June - August 2023



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## ISSUE HIGHLIGHTS

The 4<sup>th</sup> issue of aerOS newsletter presents the project activities during the period June - August 2023. This specific issue focuses on the communication and dissemination activities, EuCNC 2023 participation EUCloudEdgeIoT related activities, the Open Call announcement, the project deliverables and the 2<sup>nd</sup> Plenary Meeting.

aerOS trimester activities in numbers:

- 4 Publications
- 5 Presentations
- 1 Video
- 1 Pilot Workshop
- Booth at iVT Expo
- EuCNC 2023
- EUCloudEdgeIoT Activities
- Open Call Announcement
- 3 Period Deliverables
- 2nd Plenary Meeting



## Communication & Dissemination Activities

### Publications

The aerOS journal paper entitled: "Probabilistic-Assured Resource Provisioning With Customizable Hybrid Isolation for Vertical Industrial Slicing" is now available! You may find more information online here: <https://ieeexplore.ieee.org/document/9940477>

The aerOS journal paper entitled "AI/ML Service Enablers & Model Maintenance for Beyond 5G Networks" at IEEE Network is available. Find it online here: <https://ieeexplore.ieee.org/document/10012307>

The aerOS journal paper entitled "Berth Allocation Considering Multiple Quays: A Practical Approach Using Cuckoo Search Optimization" is now available at MDPI Journal of Marine Science and Engineering. You may find more information here: <https://www.mdpi.com/2077-1312/11/7/1280>

The aerOS journal paper entitled "A Survey on In-Network Computing: Programmable Data Plane and Technology Specific Applications" is now available! Find more information about the paper here: <https://ieeexplore.ieee.org/document/9919270>

### Presentations

Vasilis Pitsilis from NCSR "DEMOKRITOS" presented "aerOS A Meta Operating System for IoT Edge-Cloud Continuum" during "Smart networks and services – 5th and 6th generation technologies" event in Athens.



Ignacio Lacalle from Universitat Politècnica de València presented aerOS Open Call upcoming opportunity in EC AIOTI Webinar: Open Calls Opportunities, 7 June 2023. You may find the video and the presentations here: <https://aioti.eu/aioti-webinar-presenting-open-call-opportunities>

aerOS partners took part at the "Cloud-Edge-IoT Innovations in Manufacturing: Unveiling Market Insights and Use Cases" which took place on July 10th in collaboration with EUCloudEdgeIoT and Fluidos project.

Our partner NCSR "Demokritos" organized the '58th Summer School', inviting both Undergraduates and Graduates, to attend a conference on technological advancements and discuss on 6G and Edge Cloud continuum research topics. Harilaos Koumaras, from NCSR "Demokritos", presented, among others, the aerOS project!

On July 27<sup>th</sup> Telefonica partner presented "Data management paradigms: data fabric & data mesh", on Internet Engineering Task Force meeting of the IETF 117 meeting.

### Video

The aerOS Pilot 5 "Infrastructure & IoT application for Smart, Energy Efficient & Health Safety Buildings" video by COSMOTE is now available! You may find it online at AerOS Project YouTube channel here: [https://www.youtube.com/watch?v=IB8GPRL\\_bRQ&t=2s](https://www.youtube.com/watch?v=IB8GPRL_bRQ&t=2s)





## *aerOS Pilot Workshop*

During August, project partners, TTControl and John Deere met at the John Deere European Innovation Technology Center in Kaiserslautern, Germany, to participate in a pilot workshop dedicated to a use case demonstrator the partners are building together. The so-called “High-Performance Computing Platform for Connected and Cooperative Mobile Machinery” is deploying novel technologies from the aerOS project.

This successful two-day meeting was about reviewing the ongoing integration activities towards a joint demonstrator and planning the next steps for realization. The demonstrator includes two scenarios that relate to cooperative large-scale production and emission-free intelligent operation in agriculture, construction, or forestry.



## *aerOS Booth*

aerOS project was represented by TTControl's booth at iVT Expo 2023. iVT Expo is an annual international exhibition (originally launched in 2018) that showcases the latest components and technologies from leading international suppliers. The show has a compact format with 150-200 exhibitors, giving engineers and designers of industrial vehicles a highly efficient environment in which to review the latest technologies and future concepts without all the inconvenience and complexity of many of the older giant industry events. At TTControl's booth, visitors were able to find project related material such as flyers and all related information from representatives of the project.



## aerOS at EuCNC 2023

aerOS was present at EuCNC & 6G Summit 2023! The 2023 EuCNC & 6G Summit built on putting together two successful conferences in the area of telecommunications: EuCNC (European Conference on Networks and Communications), supported by the European Commission, and the 6G Summit, originated from the 6G Flagship programme in Finland, one of the very first in its area. It brought together cutting-edge research and world renown industries and businesses, globally attracting in the last years more than 1300 delegates from more than 40 countries all over the world, presented and discussed the latest results, and an exhibition with more than 70 exhibitors, for demonstrating the technology developed in the area, namely within research projects from EU R&I programmes. aerOS was represented by INFOLYSiS team at the EU Commission's 6G SNS booth with material like leaflets, posters and stickers.





## *EUCloudEdgeIoT Activities*

### *News Digest Issues*

- June 2023  
<https://shorturl.at/CRS27>
- July 2023  
<https://shorturl.at/KOPTX>

### *Other Activities*

- The Cloud-Edge-IoT Innovations in Manufacturing: Unveiling Market Insights and Use Cases Webinar Report. Find it online here: <https://zenodo.org/record/8172125>
- “Meta-operating systems projects: Key solutions, open calls and use cases” booklet. Find it online here: <https://zenodo.org/record/7941594>
- “Building the EUROPEAN CLOUD, EDGE AND IOT CONTINUUM for Business and Research” Booklet. Find it online here: <https://zenodo.org/record/7941579>



## *aerOS Open Call #1*

The 1<sup>st</sup> aerOS Open Call will be officially initiated on 1st of October. It will last 4 months until the end of January 2024 and will fund 7 different projects based on [aerOS use cases](#). aerOS consortium has established eligible criteria that do not allow large companies to take part in, while permission is granted only for SMEs, RTOs, Academia and individuals. Each funded project will last a maximum of 9 months. For more information you may access the aerOS Open Call #1 webpage [here](#) and also the EUCloudEdgeIoT dedicated webpage [here](#). STAY TUNED!





## *Period Deliverables*

**D2.6 aerOS architecture definition (1) [M12]** – Initial and final specifications of the aerOS technical architecture and its components.

**D3.1 Initial distributed compute infrastructure specification and implementation [M12]** – Initial specification and implementation of aerOS infostructure components

**D4.1 Software for delivering intelligence at the edge preliminary release [M12]** – Initial software components, relationships and building blocks in relationship with the architecture.

**D5.1 Integration, evaluation plan and KPIs definition (1) [M12]** – Reference document concerning all integration and evaluation activities describing (KPIs/data gathering methods/time-plan/partners).

All public aerOS deliverables are available for downloading  
at aerOS website: <https://aeros-project.eu/dissemination/deliverables/>



## *2<sup>nd</sup> aerOS Plenary Meeting in Athens*

The 2nd plenary meeting of the Aeros Project occurred at COSMOTE's headquarters in Athens. This gathering spanned three days, commencing on June 4th and concluding on June 6th. Throughout this period, project partners engaged in in-depth discussions regarding the project's status, technical progress, and upcoming action plans. Within this meeting, technical partners also held separate meetings to delve into specific action points. On the meeting's final day, participants visited COSMOTE's smart building, which will play a pivotal role in use case 5, focused on creating energy-efficient, health-conscious, and sustainable smart buildings.



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Call: WORLD LEADING DATA AND COMPUTING TECHNOLOGIES 2021

Topic: HE-CL4-2021-DATA-01-05

Type of Action: RIA

Duration: 36 Months

Start Date: 1 September 2022