



## **CALL FOR PAPERS**

### ***Open Source 6G Networks for Connecting the Unconnected Workshop (Open6GNet)***

**Part of IEEE NETSOFT in Budapest, Hungary on June 23, 2025**

The UN Sustainable Development Goals (SDGs) and the IMT-2030 Framework highlight a crucial need to make 6G a technology for connecting the unconnected. Despite four years of global research into 6G's key technology enablers and the upcoming start of 6G standardization by 3GPP in 2025, 5G's promises remain unfulfilled. The high costs associated with complex standards and patents have made 5G products inaccessible to many industries and developing nations, with network coverage continuing to pose significant challenges in both developed and developing countries.

Additionally, private 5G networks have gained momentum due to new spectrum policies and the need for highly customized, future-proof enterprise networks. This shift has created new value chains and business models in industries undergoing digital transformation, where tailored communications infrastructures are a critical component of broader enterprise IT/OT systems.

As networks evolve from 5G to 6G, there is potential to create a more sustainable and economically viable network technology. This could empower less-developed countries to design customized networks for various public and private sectors. However, challenges also persist in developed nations, where unconnected areas remain prevalent. Industries worldwide are seeking affordable, self-sovereign communication technologies for their transformations.

The virtualization of networks has fostered a vibrant open-source community over the last two decades. Good examples in the 5G context are Kubernetes, OAI, srsRAN, Open5GS, free5GC, Kamailio IMS, and various toolkits such as PySIM, UERANSIM, OMNT, etc. This community plays a pivotal role in addressing the challenges of connectivity by providing the building blocks and toolkits required to develop local ecosystems and re-establish digital self-sovereignty globally.

This workshop aims to unite international experts from academia and industry to discuss challenges and solutions for building sustainable 5G and 6G private and public networks.

### **Topic of Interest**

**We solicit original papers** including, but not limited to:

Spectrum Strategies to Connect the Unconnected

- Dedicated spectrum
- Dynamic spectrum sharing
- Non-terrestrial networks & Satellite networks
- Integration and interworking with legacy networks

Key Application Domains in Developing Countries

- Industrial applications
- IoT applications
- Public/government applications
- Media and end-consumer applications

- Emerging business models, value chains, and partnerships
- Local SME development
- Engagement between developers and industries

#### Best practices in Virtualized Network Components, Infrastructures, and Toolkits

- End systems
- RAN and Backhaul
- Core network
- Management
- Low-cost Virtualization Infrastructures / Edge Data Centers
- Toolkits for monitoring and automation
- AI/ML best practices

#### Best practices in utilizing Open-Source Technologies for building End to End 5G/6G Networks

- Open Testbeds and development communities
- Proof of Concepts for running open testbeds
- Proof of Concepts for running development communities
- Best practices of commercial realizations & deployments

#### Best practices in building up local ecosystems and SMEs

- Research and Development strategies & approaches
- How to build up local experts
- How to build up local SMEs
- How to engage with local developers
- How to engage with local industries

### Paper Submission

Please submit high-quality original technical papers for presentation at the workshop and publication in the **NetSoft 2025 Proceedings**. All submissions must be written in English and must use the standard IEEE two-column conference template. Technical Papers must not exceed 6 pages, including references and all other material.

**Submission Link (via EDAS):** <https://edas.info/newPaper.php?c=33484>

### Important Dates

Workshop paper submission: March 14, 2025  
 Workshop paper notification of acceptance: April 11, 2025  
 Camera-ready submission: May 2, 2025  
 Workshops date: Monday, June 23, 2025

### Supported by



Workshop Organizers – Co-Chairs		Workshop and conference websites:
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