6G-XCELNEWS

Dissemination | Communication | Exploitation

6G-XCEL Featured in the SNS JU Journal 2025

6G-XCEL has been featured in the **SNS Journal 2025**, showcasing 79 cutting-edge initiatives driving Europe's 6G vision.

https://smartnetworks.europa.eu/snsjournal-2025/

What sets 6G-XCEL apart?

♦ Global Innovation:

Developing **DMMAI**—a decentralized, multi-party Al framework that seamlessly integrates across radio and optical networks.

- ◆ Broad Impact: Enabling federated AI controls, use case references, curated datasets, and benchmarks to accelerate 6G AI standardization.
- Collaborative Edge:
 Bridging EU-US research
 through testbeds and open
 innovation in O-RAN and
 beyond.
 Read more in post.



I14y Lab Tour - July 2025

On July 11th 2025, the <u>6G-XCEL</u> consortium partners had the unique opportunity to visit <u>i14y Lab</u>—one of the first Open Testing & Integration Centers (OTICs) of the O-RAN Alliance.

During the visit, team was guided through the lab's impressive history, learned about its pioneering role in open RAN testing and certification, and toured both indoor and outdoor test facilities where cutting-edge O-RAN vendor equipment is validated.

This visit reinforced the importance of collaborative testing environments and open innovation ecosystems in shaping the future of 6G networks. The knowledge exchange and shared vision for interoperability and openness is a driving force for 6G-XCEL's mission.

6G-XCEL project has received funding from the Smart Networks and Services Joint Undertaking (SNS JU) under grant agreement No. 101139194. The JU receives support from the European Union's Horizon Europe research and innovation programme.







ModelarDB demonstrated at VLDB 2025 in London

A demonstration of ModelarDB was presented in the 51st International Conference on <u>Very Large Data Bases in</u> <u>London, United Kingdom,</u> September 3, 2025.

6G-XCEL team from University of Aalborg did great work: Abduvoris Abduvakhobov, Søren Kejser Jensen, Christian Schmidt Godiksen, Christian Thomsen and Torben Bach Pedersen.

For more technical insights on the demo, check https://www.6g-xcel.eu/modelardb-demonstrated-at-vldb-2025-in-london/



Berlin Open RAN Week 2025

BOWW 2025 stage program organized by **T-Labs** - Deutsche Telekom took place from September 9th to 11th and it was a great opportunity to share thoughts on latest trends and cutting-edge science in the fields of AI, its management, and its applications eg. Network Digital Twin, Network AI, Network Automation & Selforganization as well as Resource Efficiency topics.

Dr. **Heiko Lehmann** as the host of event organized together with Dr. **Merim Dzaferagic** a discussion on "AI in Future Networks: Lessons from the Past, Challenges of the Present, and Opportunities Ahead".

Checkout: https://www.6g-xcel.eu/berlin-open-ran-week-2025-discussion-on-ai-in-future-networks/





6G-XCEL Plenary Presentations

6G-XCEL team made great

progress at 4th Plenary meeting in Berlin on July 10-11th 2025. presentations showcased groundbreaking work from both EU and U(AAU) presented "Push-Pull Coexistence towards 6G: From MAC Design to System Architecture" - offering new insights into efficient coexistence strategies in future wireless systems.

2. Adnan Shahid, PhD, SMIEEE

(IMEC) introduced "Closed-loop Intelligence using Large Language Models (LLMs) in Open Radio Access Networks" exploring the potential of AI to revolutionize network intelligence.

3. Tingjun Chen (Duke

University, US) shared visionary research on "Toward Intelligent and Efficient Optical Networks: Performance Modeling, Coexistence, and Field Trials" and "Scalable Wireless Digital Twins for High-Fidelity RF Signal Mapping".

Curious? Checkout: https://www.6g-xcel.eu/strengthening-transatlantic-research-collaborations-in-6q/



Beyond 5G: Pioneering the Path to Energy-Efficient 6G Technologies

6G-XCEL consortium had the pleasure of hosting **Prof. Dr.-Ing. Slawomir Stanczak**, Professor at TU Berlin and Head of the Wireless Communications and Networks department at Fraunhofer HHI, for a powerful and forward-looking presentation.

His talk, titled "Beyond 5G: Pioneering the Path to Energy-Efficient 6G Technologies", explored the transformative potential of 6G RIC / xGRIC architectures and the crucial role of energy efficiency, AInative design, and intelligent network control in shaping sustainable next-generation networks.

Prof. Stanczak's insights challenge us to rethink how we build and manage wireless systems, while reinforcing 6G-XCEL's mission to drive innovation and global leadership in 6G technologies.

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6G-XCEL is shaping the future of 6G with a decentralized, Al-driven network architecture that enables secure, scalable, and sustainable edge intelligence across optical and wireless infrastructures.

- Decentralized Multi-Party
 Multi-network AI (DMMAI) as a
 reference framework for 6G

 Energy-Efficient Edge Intelligence
 Privacy-Aware, Explainable AI
- Federated Learning & Data Model Sharing
- Cross-Atlantic Testbed Integration & Benchmarking

- Al Control Across Optical &
 Wireless Networks

 Zero-touch Service Orchestration and Management
 - Standardized and Open Interfaces
 - Ethics and Socio-Technical Impact of Al in 6G

Driving cross-domain Al integration to transform 6G networks into intelligent, secure, and sustainable platforms.

Consortium





















Publications

6G-XCEL has published in a number of conferences and has several articles in prestigious journals.

Visit our website to review full list of publications: https://www.6gxcel.eu/publications/



