PRESS RELEASE

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6G-XR IMPACT DAY:
ADVANCING IMMERSIVE CONNECTIVITY FOR THE 6G ERA

The 6G-XR (6G eXperimental Research) project, an EU-funded initiative under the Smart Networks and Services Joint Undertaking (SNS JU), is proud to announce its final event, the "**6G-XR Impact Day: Advancing Immersive Connectivity for the 6G Era**." This event will take place on **Tuesday, October 28, 2025, at 5TONIC – IMDEA Networks Institute in Madrid, Spain.**

The 6G-XR project has built an experimental infrastructure that allows researchers, telecom operators, and XR developers to test how advanced network features—like dynamic edge orchestration, real-time congestion management, and network slicing—can support the demanding performance needs of immersive technologies.

Culminating three years of cutting-edge experimental research in Extended Reality (XR) over Beyond 5G and 6G infrastructures, the 6G-XR Impact Day will showcase the project's key innovations through live demonstrations, spark dialogue on policy and standardisation, and explore their potential impact across vertical sectors—reinforcing European leadership in 6G technologies.

Hosted at the 5TONIC open research and innovation laboratory in Madrid, Spain, the event will bring together the project's key researchers and technology developers, vertical stakeholders, and policy experts to explore the path forward for tomorrow's digital landscape.

6G-XR   1   **www.6g-xr.eu**

What to Expect?

- **Live Demonstrations:** Presentations of key technologies developed throughout the project, such as real-time holographic communications, 3D digital twin visualization and interaction, and energy-efficient immersive service delivery.

- **Interactive Sessions:** Engaging discussions on the implementation of XR technologies across diverse verticals, including energy, mobility, media, and manufacturing.

- **Open Calls Project Showcase:** Presentations of experimentation-driven innovations from 6G-XR's Open Calls winners.

- **Policy and Standardization Dialogue:** Discussions focusing on responsible AI, environmental and social governance (ESG), and the transformative role of 6G in shaping Europe's digital future.

- **Hands-on Experience:** Opportunities to interact with the key project researchers and innovators and test the innovations.

Demonstrating Key Technological Innovations

Reliable XR over Congested Networks

Two demos show how **automated congestion detection** and **intelligent edge server selection** help maintain immersive XR communication under network stress. Scenarios include dynamic bitrate adjustment and edge-assisted remote rendering for lightweight devices.

Holographic Communication via IMS Data Channel

A futuristic telecom-native demo integrating **3D holography into smartphone dialers**, using IMS Data Channel and AI-driven cloud rendering—delivering standards-based, real-time holographic calls over 5G/6G networks.

XR-Enabled Remote Fab Lab with Digital Twins

Demonstrates how **3D digital twins and XR** can enable real-time, collaborative remote R&D and manufacturing in cyber-physical spaces. Uses 5G O-RAN with network slicing to compare eMBB and URLLC performance.

Green-Energy-Aware 5G Network Optimisation

This demo integrates **AI/ML-based energy forecasting and control** to optimise RAN energy consumption and video QoS, showing how sustainable networking meets performance in 6G contexts.

At its core, the 6G-XR project is about bridging advanced network technology with real-world use. Whether it's immersive education, connected industry, or sustainable communication systems, the innovations on display in Madrid point to a future where **XR meets reliability, intelligence, and energy efficiency**.

> *"The 6G-XR Impact Day is a unique opportunity to demonstrate the tangible results of our extensive research and development in XR over future networks. We are excited to bring together the brightest minds in technology and policy to showcase how 6G and XR are converging to redefine digital interaction and to explore the significant impact this will have across various industries."*
>
> *Dr. Jussi Haapola (University of Oulu) – 6G-XR Project Coordinator*

While participation in the 6G-XR Impact Day is free, advance registration is essential for logistical and safety planning. Don't miss this landmark event – join the 6G-XR consortium in Madrid to witness their innovations first hand.

Agenda and registration: **https://6g-xr.eu/event/6g-xr-impact-day/**

About the 6G-XR Project

The 6G eXperimental Research (6G-XR) project was launched in January 2023 with an ambition to strengthen European leadership in 6G technologies by enabling next-generation XR services and infrastructures that would provide beyond-state-of-the-art capabilities towards the 6G era. Over its course, the project developed an experimental multisite Research Infrastructure (RI) to provide a validation platform for various 6G use cases by developing enablers for networking and computing, radio access technologies beyond 5G, enablers for XR services with in-build federation, trial management, abstraction tools, as well as energy measurement frameworks.

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