

5G Lab GmbH, Freiburger Straße 37, 01067 Dresden
Press Release
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TU Dresden joins the European Commission's 6G flagship initiative for research into the next generation of wireless networks

Hexa-X is the first official research initiative across the industry ecosystem to accelerate and foster 6G research and drive European leadership in the 6G era. TU Dresden will lead the work on novel radio access technologies towards 6G and contribute to 6G vision, the development of B5G/6G architectural enablers as well as the definition of dependability beyond URLLC in the Hexa-X initiative.

The Hexa-X project has been awarded funding from the European Commission under the European Union's Horizon 2020 research and innovation program, a significant step toward bringing together key industry stakeholders in Europe to take the lead in advancing 6G. The stakeholders represent the full value-chain of future connectivity solutions ranging from network vendors, communication service providers, verticals, and technology providers, as well as the most prominent European communications research institutes.

The Hexa-X project starts on 1 January 2021, with a planned duration of 2.5 years. Nokia is the overall project lead for Hexa-X and Ericsson is technical lead, and they will work closely with a strong consortium of European partners, including Aalto, Atos, B&COM, CEA-leti, Chalmers, Intel, Nextworks, Orange, Poli Turin, Qamcom, Siemens, Sztaki, TIM, TID, TU Kaiserslautern, TU Dresden, UC3M, Uni Pisa, Uni Oulu, and WINGS ICT Solutions.

The Hexa-X project aims to connect the physical, digital, and human worlds, firmly anchored in future wireless technology and architectural research. Wireless technologies are critical for society and the economy today and their importance will continue to steadily increase with 5G and its evolution, enabling new ecosystems and services.

Six research challenges that need to be addressed to lay the technical foundation for 6G wireless systems:

- **Connecting intelligence:** AI/Machine Learning (ML) technologies need to be a vital and trusted tool for significantly improved efficiency and service experience, serving humans
- **Network of networks:** multiple types of resources need to be aggregated to create a digital ecosystem that grows more and more capable, intelligent, and heterogeneous, eventually creating a single network of networks
- **Sustainability:** energy-optimized digital infrastructure for a reduced global ICT environmental footprint, as well as delivering effective and sustainable digitization tools for global industry, society, and policymakers
- **Global service coverage:** efficient and affordable solutions for global service coverage, connecting remote places
- **Extreme experience:** extreme bitrates, extremely low (imperceptible) latencies, seemingly infinite capacity, and precision localization and sensing
- **Trustworthiness:** ensuring the confidentiality and integrity of communications and delivering data privacy, operational resilience, and security

Webpage: <https://hexa-x.eu/>