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# 6G Native extensions for XR technologies

Project duration: 15.10.2022 to 14.10.2025



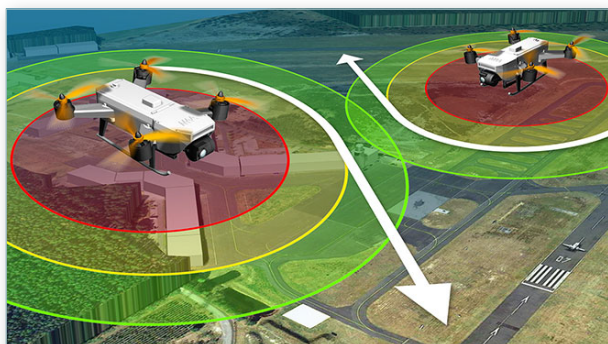
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## Application: Smart drones

Objectives: Our new 6G-based TCAS calculates exact flight routes and controls drones actively by taking aerodrome traffic into account



## 6G NeXt infrastructure: High speed backbone

Objectives: Research on and development of an infrastructure whose integrated network and software layers enable innovative and fast computing, as well as the dynamic distribution of complex computing tasks ("split computing")



## Application: Holographic communication

Objectives: Research and implementation of a real-time system with adaptive quality models for the presentation of first holographic one-to-one conferences

## 6G NeXt infrastructure: Testbed and network coverage

Objectives: Research on requirements for 6G especially on "evolution of network topology" improving current Cellular cellular base stations and introducing non-terrestrial network covering higher airspace

Implementation of mobile testbeds based on available technology



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## BMBF Industry call 6G industry projects for research into holistic systems and subtechnologies for 6th generation mobile communications - *Souverän. Digital. Vernetzt.*

The German project consortium consists of nine partners from industry and science:



### Deutsche Telekom AG / T-Labs

Coordination of the consortium and research and development of innovative approaches for intelligent and fast technologies for the expansion of the network for future, new functionalities



### Technische Universität Ilmenau

Optimization of the QoS of both applications as well as evaluation and prediction of the QoE for the HOLOCOM application, based on extracted key performance indicators



### Deutsches Forschungszentrum für Künstliche Intelligenz

Provision of the mobile testbed for end-to-end testing of the two applications



### Volucap GmbH

Volumetric data acquisition and transmission to unlock new applications for the next generation of mobile networks



### Fraunhofer-Institut für Offene Kommunikationssysteme FOKUS

Contribution of expertise, tools and testbeds to the research and development of the 6G NeXt infrastructure and feasibility evaluation of the HOLOCOM application

Weitere und assoziierte Partner:



### Logic Way GmbH

Setting up a mobile 6G network testbed and development of the communication module (edge device) and the associated software component stack



### NVIDIA

Contribute to the project by sharing knowledge and expertise on technical matters related to use cases



### Technische Hochschule Wildau

Research and development of the application of Smart Drones



### Flugplatzgesellschaft Schönhagen mbH

Professional support of the project as well as provision of the test area for safety-related and aviation law-related tests



### Technische Universität / Einstein Center

Research and development of a scalable edge-cloud software platform and support for the smart drones use case



### IDRF

Interessengemeinschaft der regionalen Flugplätze e.V. Professional support of the project as an associated partner



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