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# 6G Native extensions for XR technologies

Project duration: 15.10.2022 to 14.10.2025



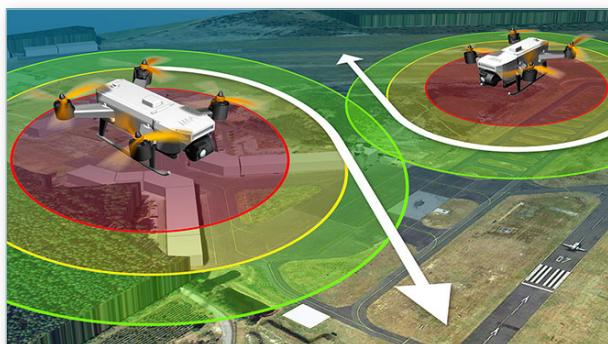
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## Application: Smart drones

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 / Einstein Center

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



### Deutsches Forschungszentrum für Künstliche Intelligenz

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



### 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



### 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



### Volucap GmbH

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



### Logic Way GmbH

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

Other and Associated Partners:



### SeeReal Technologies GmbH

Creation and wireless transmission of 3D video data for holographic image generation in multi-user applications and development of methods for quality assurance



### 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 Hochschule Wildau

Research and development of the application of Smart Drones



### IDRF

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



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