



Fraunhofer
FOKUS

Fraunhofer Institute for Open
Communication Systems FOKUS

We connect everything

**Distributed systems for an
interconnected society**

Distributed systems for an interconnected society

Fraunhofer FOKUS supports commercial enterprises and public administration in shaping the digital transformation.



Prof. Dr. Manfred Hauswirth, Executive Director FOKUS

The Fraunhofer Institute for Open Communication Systems FOKUS is one of the leading institutes in the field of applied research for information and communication technologies (ICT). Since 1988, the institute has been researching and shaping digital transformation and its effects on society, the economy, and technology. FOKUS offers commercial enterprises and public administration the entire range of research services, from requirements analysis, consulting, feasibility studies, and technology development to prototypes and piloting. Along the entire development process of distributed systems, Fraunhofer FOKUS thus brings secure and resilient data and communication technologies at the highest scientific level into application and offers customized and multi-vendor solutions in the areas of “telecommunications and information”, “digital media and culture”, “critical infrastructure protection and digital security”, “industry and production”, “transportation, aviation and space travel”, “administration and public life”, as well as “health and care”.



Prof. Dr. Tom Ritter, Deputy Director FOKUS

Cross-functional solutions in six business areas

With around 450 employees in Berlin and an annual budget of around €45 million, Fraunhofer FOKUS is one of the largest ICT institutes in the Fraunhofer-Gesellschaft. It generates around three-quarters of its budget from industry and public sector contracts in six scientific business units. Prof. Dr. Manfred Hauswirth



Our fields of application

- Telecommunications and information
- Digital media and culture
- Critical infrastructure protection and digital security
- Industry and production
- Transport, aviation, and aerospace
- Administration and public life
- Health and care



We understand digital connectivity comprehensively from a technical, economic and social perspective. We offer our customers from business, administration and society, solutions that are tailored to their specific requirements.”

heads the institute and holds the »Open Distributed Systems« chair at the Technische Universität Berlin. The institute's researchers work in the six business units »Digital Public Services«, »Future Applications and Media«, »Quality Engineering«, »Smart Mobility«, »Software-based Networks« and »Collaborative Safety and Security« in nationally, European, and internationally funded research projects as well as in contract research for customers. In doing so, the researchers use the institute's access to a world-class R&D infrastructure and test environments, internationally renowned and interdisciplinary Fraunhofer expertise, and an international

network of experts from research, industry, administration, and politics. This enables FOKUS to identify emerging market trends early, set impulses for future technologies, and build successful partnerships with all key players in the industry. Cooperation occurs in individual projects or within the framework of long-term cooperation agreements.

Comprehensive approach based on decades of experience

Researchers at FOKUS understand digitalization and networking from a technical, economic, and societal perspective: decades of technical expertise and domain knowledge provide them with an overview of technological development and targeted access to the right means for the respective purpose. To this end, the researchers are actively involved in standardization committees to promote the interoperability of new technologies and accelerate their transfer to the market. With this holistic application expertise for distributed systems, FOKUS has a unique place among the renowned Fraunhofer Institutes.

Multidisciplinary research

Fraunhofer FOKUS is a reliable and competent partner in research programs of the European Commission and national funding agencies, such as the Federal Ministry of Research, Technology and Space (BMFTR), the Federal Foreign Office (AA), the Federal Ministry for Digital and State Modernisation (BMDS), the Federal Ministry of Finance (BMF), the Federal Ministry of Health (BMG), the Federal Ministry of the Interior (BMI), the Federal Ministry for Economic Affairs and Energy (BMWE) and the Federal Ministry of Transport (BMV). With its transfer mission from scientific technology development to economic application, the institute provides an

Our expertise

- Distributed systems
- Digital networking
- Software engineering and architectures
- Application of artificial intelligence
- Simulation and data analysis
- Infrastructures and platforms
- IT security
- Quantum computing

economic exploitation perspective for scientific findings. The scientists work closely with German universities, notably the Technical University of Berlin, the Free University of Berlin, and the Humboldt University of Berlin, as well as with many leading universities worldwide. The large number of chairs in various departments held by researchers at FOKUS reflects the deep integration into the university research landscape.



Next-generation technology 5G+: Fraunhofer FOKUS is a leading institute for digital networking.

Research and development

- Design, implementation, piloting, and evaluation of complex systems for distributed infrastructures
- Integration and networking of systems, components, and services
- Method and tool development as well as accompanying processes
- Adaptation of proprietary interfaces and systems to industrial, national, and international standards
- Quality assurance and certification
- Participation in standardization committees

Consulting and project support

- Planning and support for research and development projects
- Requirements analysis and feasibility studies for setting up new and converting existing communication infrastructures, services, and applications
- Technology, process, and tool evaluations for specific applications
- Moderating consulting during decision-making phases
- Project management and quality assurance in large-scale projects
- Technology, product, and application-oriented training courses
- Evaluation of technology trends

The Fraunhofer-Gesellschaft

The Fraunhofer-Gesellschaft, headquartered in Germany, is one of the world's leading organizations for applied research. It plays a major role in innovation by prioritizing research on cutting-edge technologies and the transfer of results to industry to strengthen Germany's industrial base and for the benefit of society as a whole. Since its founding as a nonprofit organization in 1949, Fraunhofer has held a unique position in the German research and innovation ecosystem.

With nearly 32,000 employees across 75 institutes and independent research units in Germany, Fraunhofer operates with an annual budget of €3.6 billion, €3.1 billion of which is generated by contract research – Fraunhofer's core business model. Unlike other public research organizations, base funding from the German federal and state governments is merely the foundation for the annual research budget. This serves as the basis for groundbreaking precompetitive research that will become important for the private sector and society in the years ahead. Fraunhofer's distinctive feature is its large share of industry revenue, guaranteeing close collaboration with the private sector and industry, and the consistent focus of Fraunhofer's research on the market. Fraunhofer's research portfolio is augmented by competitively acquired public-sector funding.

Your advantages with Fraunhofer FOKUS

- Expertise in the field of resilient, secure data and communication technologies
- Quality throughout the entire development process
- Interoperability with industrial, national and international standards
- Solutions from a technical, economic and social perspective
- In-depth domain knowledge and technical expertise at the highest scientific level
- Access to an excellent network of research, business, industry, administration, and politics

Our customers come from the following industries and domains

- Telecommunications and media technologies
- Broadcasters and content publishers
- Authorities and organizations with security tasks
- Industry and technology development (large-scale industry, SMEs, start-ups)
- Aerospace
- Mobility (especially automotive, rail)
- Public administration
- Finance and insurance

Contact

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