

PRESS RELEASE

Fraunhofer Heilbronn Research and Innovation Centers

Dieter Schwarz Foundation and Fraunhofer to Strengthen Heilbronn as a Research Hub

The Fraunhofer-Gesellschaft will expand its activities in Heilbronn significantly with funding from the Dieter Schwarz Foundation. From 2025, a total of eight research and innovation centers will address research topics ranging from cybersecurity to quantum AI. This will provide an important impetus for innovation in Germany and strengthen the country's competitiveness in these fields.

The Dieter Schwarz Foundation has been supporting the Fraunhofer-Gesellschaft in Heilbronn since 2019, both financially and through the provision of office and laboratory space on the Bildungscampus Heilbronn. Institutes that are already benefiting from the non-profit foundation's support include the Fraunhofer Institute for Industrial Engineering IAO and the Fraunhofer Institute for Systems and Innovation Research ISI.

Extensive funding from 2025

A new funding agreement with the Dieter Schwarz Foundation will now enable Fraunhofer to expand and further focus its activities in the region from 2025: New centers are to be established in addition to the existing ones, bringing the total number of research and innovation centers in Heilbronn to eight. In addition to Fraunhofer IAO, Fraunhofer ISI and the Fraunhofer Information Center for Planning and Building IRB, the Fraunhofer Institute for Intelligent Information and Analysis Systems IAIS, the Fraunhofer Institute for Secure Information Technology SIT (with its ATHENE Center), and the Fraunhofer Institute for Manufacturing Engineering and Automation IPA will also be included. The various activities conducted in Heilbronn will be subsumed under the name Fraunhofer Heilbronn Research and Innovation Centers, or Fraunhofer HNFIZ for short.

Prof. Holger Hanselka, President of the Fraunhofer-Gesellschaft, said: "Fraunhofer HNFIZ will focus on future-relevant key technologies and on utilizing the research results in business and industry. The centers are set to close a gap and play a key role in Germany's innovation system. The respective research and innovation centers, as well

Contact

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Monika Landgraf | Fraunhofer-Gesellschaft, Munich, Germany | Communications | Phone +49 89 1205-1333 | presse@zv.fraunhofer.de Julia Bohrmann | Dieter Schwarz Foundation, Heilbronn, Germany | Press and Public Relations | Phone +49 7132 30-7032 | julia.bohrmann@dieter-schwarz-stiftung.de



as the Heilbronn location as a whole, will send a strong signal from Heilbronn to Europe and the world as a center for ethical value creation. I would like to thank the Dieter Schwarz Foundation for its extensive support for this project."

"I am certain that the Fraunhofer Heilbronn Research and Innovation Centers will become a catalyst for economic, social and scientific development in the Heilbronn region. They will strengthen the region as a leading hub for research and innovation, which will make a decisive contribution to shaping the future in the fields of digital transformation, artificial intelligence, and sustainable systems," explained Prof. Reinhold Geilsdörfer, Managing Director of the Dieter Schwarz Foundation.

Important impetus for the economy and society

Close collaboration with companies, organizations, and public-sector institutions in the region is a central focus of the project. Working closely with educational institutions and innovation players in the Heilbronn region will create a unique scientific ecosystem that aims for intensive transfer and economic utilization. Development funding is initially slated to run until 2034, but the project is planned for the long term. Some 300 full-time research scientists are expected to work for Fraunhofer HNFIZ at the end of the development phase, almost 200 of them directly in Heilbronn.

The closely intertwined regional research hub is designed for collaborative, agile work. The overall strategic decisions for Fraunhofer HNFIZ are made by a group of spokespersons, which will be initially headed by Prof. Wilhelm Bauer, Director of Fraunhofer IAO, the lead institute at the Fraunhofer location in Heilbronn. At the beginning, Prof. Marion A. Weissenberger-Eibl, Director of Fraunhofer ISI, will take over as his deputy. The project is set to avoid overlaps with existing Fraunhofer activities and to follow an innovative approach for transferring and utilizing its research results from the outset in order to provide effective stimuli for industry and society.

"The Fraunhofer model will also apply to the five new centers, as is the case for the Cognitive Service Systems, Future Skills, and Innovation & Foresight centers, which are already in place. To obtain funding, they must demonstrate successful commercial activities and acquire public research funding in a competitive process. The resulting consistent market orientation will ensure an effective innovation push for research and development work in the region and beyond," said Prof. Bauer.

Solutions from Heilbronn for Germany and Europe

The Fraunhofer Research and Innovation Centers are pooling a wide range of expertise in Heilbronn. Starting next year, a total of eight centers will conduct research in Heilbronn (Fraunhofer institutes involved in brackets):

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- **Cognitive Service Systems** (Fraunhofer IAO) Al-based service systems for viable value creation
- **Future Skills** (Fraunhofer IAO, Fraunhofer IRB) Al-based innovation activation in continuing education
- Innovation & Foresight (Fraunhofer ISI) Systemic innovation research and shaping future innovations for innovative futures
- **Hybrid Artificial Intelligence** (Fraunhofer IAIS, Fraunhofer IAO) From human-in-the-loop to agent-in-the-loop approaches
- **Transformation & Governance** (Fraunhofer IRB, Fraunhofer IAO) Governance models and transfer strategies for multiple transformation processes
- **AI-Based Robotics** (Fraunhofer IPA, Fraunhofer IAO) AI-based automation for the manipulation and handling of goods and components
- **Cybersecurity** (Fraunhofer SIT) Enterprise security as the basis for the digital transformation of the economy
- Applied Quantum AI (Fraunhofer IAO, Fraunhofer IPA)
 Codevelopment of quantum and AI solutions for mutual reinforcement

The research and innovation portfolio will cover different levels of maturity, while being tailored to the pressing needs of the economy and society. The applications and solutions developed in Heilbronn are expected to find their way into the world via Europe, thereby strengthening the region and Germany as a whole.

Partners involved

The following Fraunhofer institutes, centers and entities are involved in the Fraunhofer Heilbronn Research and Innovation Centers HNFIZ:

- **Fraunhofer IAO**: The Fraunhofer Institute for Industrial Engineering IAO works together with companies, institutions and public-sector bodies to develop strategies, business models and solutions for digital transformation.
- **Fraunhofer ISI:** The Fraunhofer Institute for Systems and Innovation Research ISI analyzes the emergence and impact of innovations. The institute researches the short and long-term development of innovation processes and the social impact of new technologies and services.
- **Fraunhofer IRB:** The Fraunhofer Information Center for Planning and Building IRB offers tailor-made solutions in the fields of transformation, governance, continuing education and training, AI and data science, publishing, and construction expertise.

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- **Fraunhofer IAIS:** The Fraunhofer Institute for Intelligent Analysis and Information Systems IAIS, based in Sankt Augustin/Bonn and with an office in Dresden, is one of Germany's and Europe's leading scientific institutes in the fields of artificial intelligence (AI), machine learning, and big data.
- **Fraunhofer SIT:** The Fraunhofer Institute for Secure Information Technology SIT is one of the world's leading research institutions for cybersecurity and privacy. The institute addresses key security challenges in business, administration, and society and conducts practical cutting-edge research and innovation development. Fraunhofer SIT is one of the driving forces in the international IT security landscape and is the largest contributor to the National Research Center for Applied Cybersecurity ATHENE. ATHENE is the largest research center for applied cybersecurity research in Europe, and a key part of the cybersecurity architecture for Germany and the state of Hesse.
- **Fraunhofer IPA**: The Fraunhofer Institute for Manufacturing Engineering and Automation IPA is one of the largest institutes of the Fraunhofer-Gesellschaft and develops manufacturing and automation expertise in eleven research fields.

Further information on the individual research and innovation centers in Fraunhofer HNFIZ can be found at:

https://www.fraunhofer.de/en/press/research-news/2024/december-2024/dieterschwarz-foundation-and-fraunhofer-to-strengthen-heilbronn-as-a-research-hub.html

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Fig. 1 The Fraunhofer-Gesellschaft will expand its activities in Heilbronn significantly with funding from the Dieter Schwarz Foundation. From left to right: Prof. Holger Hanselka (President of the Fraunhofer-Gesellschaft), Prof. Reinhold Geilsdörfer (Managing Director of the Dieter Schwarz Foundation) and Prof. Wilhelm Bauer (Director of Fraunhofer IAO)

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About the Dieter Schwarz Foundation:

The Dieter Schwarz Foundation ranks among the large German foundations; it becomes active where government bodies are not, or not sufficiently, able to meet the needs of the economy and society. "Promote education, share knowledge, venture future" is the guiding principle of the Foundation, which supports with its commitment today what makes tomorrow's society strong: a wide range of educational opportunities targeting people at different stages of their lives.

Further information about the Dieter Schwarz Foundation can be found at: <u>https://www.dieter-schwarz-stiftung.de/</u>

The Fraunhofer-Gesellschaft, based in Germany, is one of the world's leading applied research organizations. It plays a crucial role in the innovation process by prioritizing research in key future technologies and transferring its research findings to industry in order to strengthen Germany as a hub of industrial activity as well as for the benefit of society. Founded in 1949, the Fraunhofer-Gesellschaft currently operates 76 institutes and research units throughout Germany. Its nearly 32,000 employees, predominantly scientists and engineers, work with an annual business volume of 3.4 billion euros; 3.0 billion euros of this stems from contract research.