



Stuttgart, May 6, 2025

# Fast Track Innovation Camp

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**Sustainable Solutions with  
Quantum Sensors**

# Preface

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Technologies and products in the field of environmental protection and climate positivity remain crucial economic factors for Germany and play a central role in the transformation to a sustainable economy. Quantum and photonic technologies already play an important role and offer immense opportunities for innovative developments. These technologies enable, among other things, more precise measurements, the development of more efficient energy generation systems, and the exploration of new materials that are potentially more environmentally friendly.

In the morning, experts in quantum and sustainability will showcase future markets for quantum and photonic technologies under the motto »Sustainable Solutions with Quantum Sensing«. In the afternoon, participants will receive a crash course on working with quantum sensors. Afterwards, application ideas will be developed and prototyped in working groups. No prior knowledge is necessary. You will get to know various materials, tools, and methods to develop quantum innovation ideas.

As part of the projects



In cooperation with



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# Program

Tuesday, May 6, 2025



09:30 a.m. Registration

10:00 a.m. Welcome

*Dr.-Ing. Fabian Edel, Fraunhofer IAO*

10:10 a.m. **Quantum technologies — a quantum leap for sustainability?**

*Tobias Prenzel, Fraunhofer IBP*

*Sharon Stauffert, IABP University of Stuttgart*

10:30 a.m. **Best-Practice**

**Medical technology and sustainability: Potentials of quantum sensors**

*Dr. rer. nat. Michael Haupt, Institute for Laser Technologies in Medicine and Metrology at the University of Ulm*

10:50 a.m. **Responsible Development of Quantum Technology**

*Emily Haworth, PushQuantum e.V.*

11:10 a.m. **NVision: Hyperpolarized MRI and NMR made simple**

*Dr. Anna Parker, NVision Imaging Technologies GmbH*

11:30 a.m. **QUANDERlab: Experiencing quantum, shaping sustainable innovations**

*Juliana Ludwig, IAT University of Stuttgart*

11:50 a.m. **Panel**

*Moderation: Felix Schmidt  
PushQuantum e.V.*

12:15 noon Lunch

13:00 p.m. **Makeathon**

**Impulse: Introduction to quantum sensors**

*Dr.-Ing. Truong Le, Fraunhofer IAO*

**Ideation: Playful idea generation with quantum wheel and card game**

*Benjamin Burkard, Fraunhofer IAO*

**Impulse: Low-cost NV quantum sensor in development**

*Jens Witzl, IAT University of Stuttgart*

**Prototyping: Simple prototypes with electronic components**

*Dr.-Ing. Truong Le, Fraunhofer IAO*

**Pitching: Result presentation**

*Sabina Bähr, IAT University of Stuttgart*

17:00 p.m. **Feedback**

17:30 p.m. **End of the workshop**

## More information about the event

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<https://www.iao.fraunhofer.de/de/veranstaltungen/2025/fast-track-innovation-camp.html>

## Curious?

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[blog.iao.fraunhofer.de](https://blog.iao.fraunhofer.de)



### **YouTube**

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