

## Milestone Reached: External Users Gain Access to the QSolid Quantum Computer for the First Time

Jülich, 17 November 2025 – Scientists at Forschungszentrum Jülich, together with their partners from the [QSolid](#) consortium, have achieved a significant project milestone: the project team has successfully integrated the prototype of a quantum computer into the Jülich Supercomputing Centre's infrastructure, known as JUNIQ. This marks an important step toward establishing a comprehensive German quantum ecosystem.

Just three and a half years after the project's kick-off, the prototype of a system-integrated quantum computer is being made available to external users for an initial two-week test phase starting on 17 November 2025. "It is an outstanding achievement by our team to have succeeded in building a complete prototype from scratch. From the chip upwards, it consists of hardware developed at Forschungszentrum Jülich. In addition, another prototype will be launched in January. The feedback from our first users will now be crucial to further optimise the quantum computer," explains Prof. Dr. Frank Wilhelm-Mauch, coordinator of QSolid.

The computer, currently operating with a capacity of 10-qubits, will be accessible via the [JuDoor](#) cloud platform. The term *qubit*, short for *quantum bit*, refers to the fundamental unit of quantum information.

### Close Cooperation among Project Partners Leads to a Successful System Integration

The development and integration of the software stack, a collection of functional software components, was achieved through close collaboration between research institutions and industrial partners. The companies [Qruise](#) and [Eviden](#), key providers in the fields of quantum firmware and high-performance computing, supplied the necessary software components, while Forschungszentrum Jülich carried out the professional system integration. "On the path from a physics experiment to a full prototype, we must always keep an eye on the compatibility and interplay of the components. This is often underestimated in research," says Dr. Paolo Bianco, head of the system engineering team at Forschungszentrum Jülich.

The industrial partners [ParTec](#), [ParityQC](#), and [HQS Quantum Simulations](#) will be the first users outside Jülich's infrastructure to participate in the two-week test run. This pilot phase will soon be followed by another one using updated software. Hardware improvements are also planned: the team led by Prof. Dr. Rami Barends (Forschungszentrum Jülich) will soon replace the current quantum chip with another even more powerful version.

### A Strong Signal for the 'High-Tech Agenda Germany'

Just two weeks after the launch event of the '[High-Tech Agenda Germany](#)', initiated by the Federal Ministry for Research, Technology and Space ([BMFTR](#)), QSolid's success marks a significant momentum. The research project, with a total budget of €76.3 million, demonstrates that German scientists already contribute to shaping European cutting-edge research in a key technology area of the agenda. "The system integration serves as a blueprint for developing a German quantum computer. From a technical perspective, it represents an ideal starting point for the High-Tech

Agenda Germany of the Federal Ministry for Research, Technology and Space,” states Wilhelm-Mauch.

## Contact details

**Institution** Forschungszentrum Jülich  
**Project coordinator** Prof. Dr. Frank Wilhelm-Mauch

**Institution** EURICE GmbH  
**Contact** Marlena Jakobs  
**Position** Communications Manager  
**Email** [m.jakobs@eurice.eu](mailto:m.jakobs@eurice.eu)

## QSolid key data

**Acronym** QSolid  
**Title** Quantum Computer in the Solid State  
**Project duration** January 2022 - December 2026  
**Budget** € 76.3 million (of which 89.8 % is funded by the BMFTR)  
**Partners** Forschungszentrum Jülich, Fraunhofer IZM und IPMS, Karlsruhe Institute for Technology, Leibniz IPHT, ParityQC, HQS Quantum Simulations, Rosenberger, Ulm University, Physikalisch-Technische Bundesanstalt, Qruise, University of Stuttgart, FU Berlin, IQM, University of Konstanz, University of Cologne, Heinrich-Heine University Düsseldorf, Supracon, ParTec, Racyics, AdMOS, LPKF Laser & Electronics, MKS Atotech, s+c / Eviden, Globalfoundries, CiS Forschungsinstitut für Mikrosensorik, Zurich Instruments  
**Website** [www.q-solid.de](http://www.q-solid.de)  
**X** [https://twitter.com/QSolid\\_DE](https://twitter.com/QSolid_DE)  
**LinkedIn** <https://www.linkedin.com/showcase/qsolid>  
**YouTube** <https://www.youtube.com/@qsolid>

## **BMFTR framework programme: “Quantum technologies – from basic research to market”**

The QSolid project is part of the framework programme entitled “Quantum technologies – from basic research to market”. Coordinated by the Federal Ministry of Research Technology and Space (BMFTR), the programme combines the goals of the German Federal Government in relation to the development of quantum technologies:

- 1.** Developing the quantum technology research landscape
- 2.** Creating research networks for new applications
- 3.** Establishing industrial competitiveness through lighthouse projects
- 4.** Ensuring security and technical sovereignty
- 5.** Shaping international collaboration
- 6.** Getting Germany’s population involved

More information (in German): [www.quantentechnologien.de/qt-in-deutschland/programm.html](http://www.quantentechnologien.de/qt-in-deutschland/programm.html)