

A strong ecosystem for quantum computing

Our Mission

Quantum computing has enormous potential for business and research. We need a strong quantum computing ecosystem to be able to compete in the international race for the first useful quantum computers. Germany and Europe have the prerequisites for this: strong quantum research, innovative deep-tech start-ups and relevant use cases, for example in industry.

However, the production of quantum computers and the development of useful use cases is technologically challenging. Building a strong ecosystem for quantum computing therefore requires a long-term perspective and close cooperation between industry, research and government.

Our Ecosystem Approach

To achieve a leading international position in quantum computing, we need efficient technology transfer between science and application, technological infrastructures for the production of quantum computers and active development of future users in industry, research and public authorities.

That is why we are bringing together deep-tech start-ups, industry and research at our innovation centres in Hamburg and Ulm to jointly develop quantum computers and relevant use cases. The Federal Ministry of Research, Technology and Space has provided us with the necessary funding for this.

Our Objective

Since our foundation in 2021, we have created a strong ecosystem - which is now making an impact. We have successfully provided the technological infrastructures in which our hardware teams are now developing their quantum computing and manufacturing technologies. Our application teams have identified potential quantum computing use cases and are now implementing them for the first quantum computers.

Facts & Figures

- + Research, industry and start-ups jointly develop hardware, necessary technologies and use cases for quantum computing
- + Financed by the Federal Ministry for Economic Affairs and Climate Action (BMWK)

2 Innovation Centres

with over 4,200 m² of infrastructure for industrial partners, research projects, operation and the connection of quantum computers

+ Hamburg Innovation Centre · <https://qci.dlr.de/en/izhh>

6 HW projects, 150 mm process chain for ion traps

+ Ulm Innovation Centre · <https://qci.dlr.de/en/izul>

10 HW projects, 100- & 150-mm process chain for Si, III/V & diamond

17 Hardware projects

<https://qci.dlr.de/en/projects/#projects-hardware>

11 Quantum computer projects | **15** Quantum computer finally in operation

5 Enabling technologies, for example innovative manufacturing methods

1 Analogue computer project: complementary future-of-compute approach

5 Technologies

<https://qci.dlr.de/en/technologies/>

Ion traps, NV centres, neutral atoms, solid-state spin, photons + analogue computer

3 QCI Enabling Services

Our quantum computers for industrial applications

QCI Connect · Cloud access to DLR QCI quantum computers for the economy

<https://qci.dlr.de/en/connect>

QC Solution Centre · Use case analysis and development for German SMEs

Industrial contracts · fully funded contracts for the development of quantum computers and use cases. Competitive process, state as anchor customer.

60+ application

Joint development of relevant use cases for research and industry

<https://qci.dlr.de/en/projects#projects-applications>

- 22** Projects from DLR institutes developing use cases for quantum computers for example use cases for optimisation, materials research & quantum machine learning
- 40+** Industrial orders to start-ups and industry for the (further) development of relevant use cases with our quantum computers

65 Industry Partners & sub-contractors

for the joint development of hardware, software and use cases

<https://qci.dlr.de/ecosystem>

- + Start-ups, industrial companies, management consultancies, research organisations
- + Tendered competitively and Europe-wide
- + As of November 2025; many more to follow

19 DLR institutes from all over Germany

- + Application development + Enabling technologies + Technological infrastructure
- + Unique domain expertise in the subject areas of DLR
- + Develop relevant use cases for quantum computers together with start-ups, industry and SMEs
- + have access to the quantum computers of the DLR QCI

Contact

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