

QUANTUM EUROPE STRATEGY

July 2025

Harnessing the laws of physics, quantum technologies will revolutionise how we solve complex challenges relating to health, energy, logistics and finance.

The Quantum Europe Strategy aims to make Europe a global leader in quantum by 2030.

EUROPE'S STRENGTHS



Scientific leadership: Nobel prize level of expertise.

MAIN GOALS



To turn scientific discoveries into market-ready applications.

FIVE TARGETED AREAS



€ 11 billion invested: By EU and Member States in the last 5 years.



Vibrant ecosystem: Thriving quantum startups and SMEs.



To **enhance Europe's security** and **tech sovereignty**.

QUANTUM

EUROPE

Quantum ecosystem

R&I

Quantum

infrastructure

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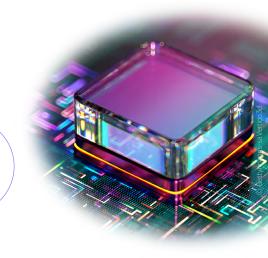
Dual-use

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Skills



To maintain Europe's scientific leadership.



1. RESEARCH AND INNOVATION



Discover

Support foundational research and technology.



From lab to fab

Invest in infrastructure, technologies, and workforce.



Apply and use

Quantum sensing -

for ultra-precise

• Deploy a distributed system of

gravimeters across Europe;

checks across Europe.

Create a pilot infrastructure for

quantum MRI to improve health

measurements

Develop applications for key public and industrial sectors.

2. OUANTUM INFRASTRUCTURE

Europe will expand public investments in:



Quantum computing and simulation for problem-solving

- Invest in quantum simulators;
- Expand EuroHPC quantum computing capacity.



- Deploy EU's first experimental terrestrial-space secure network:
- Launch a pilot facility for the European Quantum Internet.

3. OUANTUM ECOSYSTEM



Move to industrialisation



Scale up the European quantum ecosystem



Strengthen the supply chain security

4. SPACE AND DUAL USE



Invest in quantum clocks, sensors and secure links for Galileo and IRIS²



Launch initiatives for defence applications

Develop Quantum Sensing Space and Defence Technology Roadmap

5. OUANTUM SKILLS

Address skills shortage, attract and retain talent.



European Quantum Skills Academy



European Advanced Digital Skills Competitions in quantum



European Quantum Talent Mobility Programme

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