European Commission



THE QUANTUM ACT

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The Quantum Act is an enabling framework to turn Europe's quantum research strengths into industrial leadership. It supports the Quantum Europe Strategy's ambition for Europe to be a global leader in quantum technologies.

The Quantum Act proposes a new Sovereign Tech Equity Fund, unlocking large-scale equity investments needed for quantum and other critical technologies in Europe.

WHAT IS QUANTUM TECHNOLOGY?

Quantum computing, communication, sensing and metrology use quantum physics to offer new ways to process information, protect communications and make precise measurements.

THREE PILLARS OF THE QUANTUM ACT

RESEARCH EXCELLENCE

Connect leading researchers through a Quantum Excellence Network. Promote quantum grand challenges. Strengthen research in post-quantum cryptography.

BRINGING QUANTUM TECHNOLOGY INTO USE

Support strategic infrastructure and projects. Connect companies with specialised hubs, competence centres and financial advice. Strengthen demand, standards and interoperability.

KEEPING SYSTEMS AND SUPPLIES SECURE

Support the transition to post-quantum cryptography. Monitor critical components and supply-chain dependencies. Strengthen resilience and trusted international cooperation.

QUANTUM EUROPE FRAMEWORK INITIATIVE

Aligning EU and national programmes, creating a single European approach to fostering quantum

Specialist hubs would provide technical support to SMEs to resolve specific engineering bottlenecks they face when developing quantum products. **Competence and accelerations centres in each Member State** will provide guidance on expertise, skills, facilities and funding opportunities. **Grand challenges** bring together researchers and industry to help SMEs resolve major technological and engineering challenges and speed up time to market. Designation as a **strategic project** allows this idea to scale up to industrial production. Public procurement helps bring applications to the market.

Scientific & excellence & Grand Challenges	Engineering & validation through Hubs	Pilot infrastructure and strategic projects	Scale-up finance & procurement	Market uptake



PREPAREDNESS FOR A QUANTUM-SAFE FUTURE

Post Quantum Cryptography

The Commission and Member States will work towards the transition to post-quantum cryptography, to help keep Europe's digital systems secure. Monitoring will help identify emerging supply-chain risks.



THE SOVEREIGN TECH EQUITY FUND

A new investment vehicle to support the development of innovative technologies like quantum key to European tech sovereignty and economic security.

BUILDING ON EXISTING EU INITIATIVES



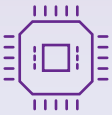
EUROHPC QUANTUM COMPUTERS

Quantum compuing resources integrated with European supercomputing.



EUROQCI

Building secure quantum communication infrastructure.



QUANTUM PILOT LINES

Fabrication, testing and validation for quantum chips.



QUANTUM SKILLS ACADEMY

Specialist skills and training.



QUANTUM FLAGSHIP

A one billion euro programme for quantum R&D.

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