



Tecnologie Quantistiche

Stato attuale iniziative di politica Europea

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DG CNECT C4 Emerging and disruptive technologies

Outlook: Global Public Funding



Region/Country	Public Investment	Private Investment	Key Players
European Union	MS +6bn + €2B Quantum Flagship (HE)	Lower compared to global counterparts	Universities, startups, MS and EU-led, IQM, Pasqal, AQT, Blueforce,...
United States	National Quantum Initiative	Strong from bit tech players such as Google, IBM, Microsoft	Google, IBM, Microsoft, Rigetti, Qera, Quantinuum, ...
China	Large state-backed investment in quantum infrastructure	Growing, government-driven	Government-led, Alibaba, Huawei
Canada	Gov-private partnerships on quantum computing research	Strong collaboration with D-Wave, Xanadu	D-Wave, Xanadu, ...
Japan	Significant gov investment (Moonshot, Quantum Strategic Program)	Growing with Toshiba, NTT, Fujitsu	Toshiba, NTT, Fujitsu, Q*Quantum
UK	Major public funding through UK National Quantum Technologies Programme	Moderate, focused on startups and collaborations	OQC, ORCA, Riverlane, Universal Quantum
Australia	State investment in quantum computing and communications	Collaboration with companies like Silicon Quantum Computing	Silicon Quantum Computing, Quantum Brilliance, Diraq

The international competition and the corresponding public funds having radically increased over the past years

Source: qt.eu, McKinsey, Qureca



The urgency for Europe to act



Shaping Europe's digital future

[Home](#) > [Library](#) > [Quantum Europe Strategy](#)

POLICY AND LEGISLATION | Publication 02 July 2025

Quantum Europe Strategy

The European Commission has adopted a Quantum Strategy to position Europe as a global leader in quantum by 2030.

Why a Quantum Strategy



Global race heating up



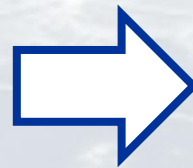
Fragile ecosystem



Fragmentation



Acting now secures sovereignty

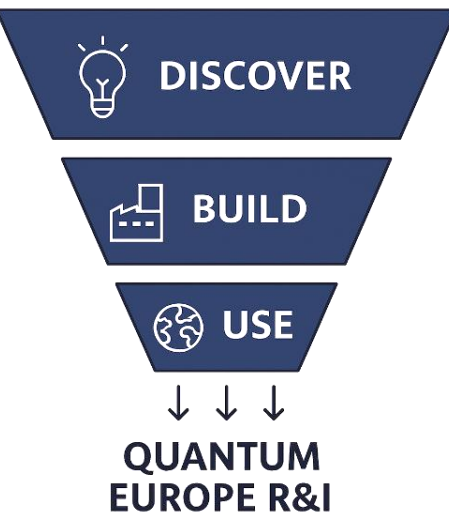


Europe must act now to secure leadership, avoid dependency, and capture industrial value

Quantum Europe Strategy: Areas



FROM LAB TO MARKET



SCALING QUANTUM CAPABILITIES

- Quantum computers in 10+ EU countries
 - EuroHPC
- EuroQCI secure quantum communication
 - Quantum sensors gravimeters, MRI, inertial navigation
- Pilot lines for production and testing
 - Interoperability & hybrid systems

GROWING EUROPE'S QUANTUM ECONOMY

- 6 industrial pilot lines
- EU Design Facility + cloud-based tools
- Public procurement to stimulate demand
- QU-TEST: EU-wide certification + benchmarking
- IP strategy + resilience for EU supply chain

STRATEGIC AUTONOMY IN SPACE, SECURITY & DEFENCE

- Quantum sensors for GNSS-free navigation
- Quantum communication in IRIS² satellites
- Roadmaps: PQC, dual-use applications, ESA cooperation
- Quantum in EU defence and NATO strategy
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Arrows labeled "CIVIL" and "DEFENCE" point in opposite directions.

A QUANTUM WORKFORCE FOR THE FUTURE

- 110,000+ graduates/year in related fields
- European Quantum Skills Academy (2026)
- Training, scholarships, internships, mobility schemes
- Outreach to schools and Widening Countries
- Talent portal + 'Teach the Teacher' modules
- Robust IP strategy

Quantum Europe Strategy Roadmaps

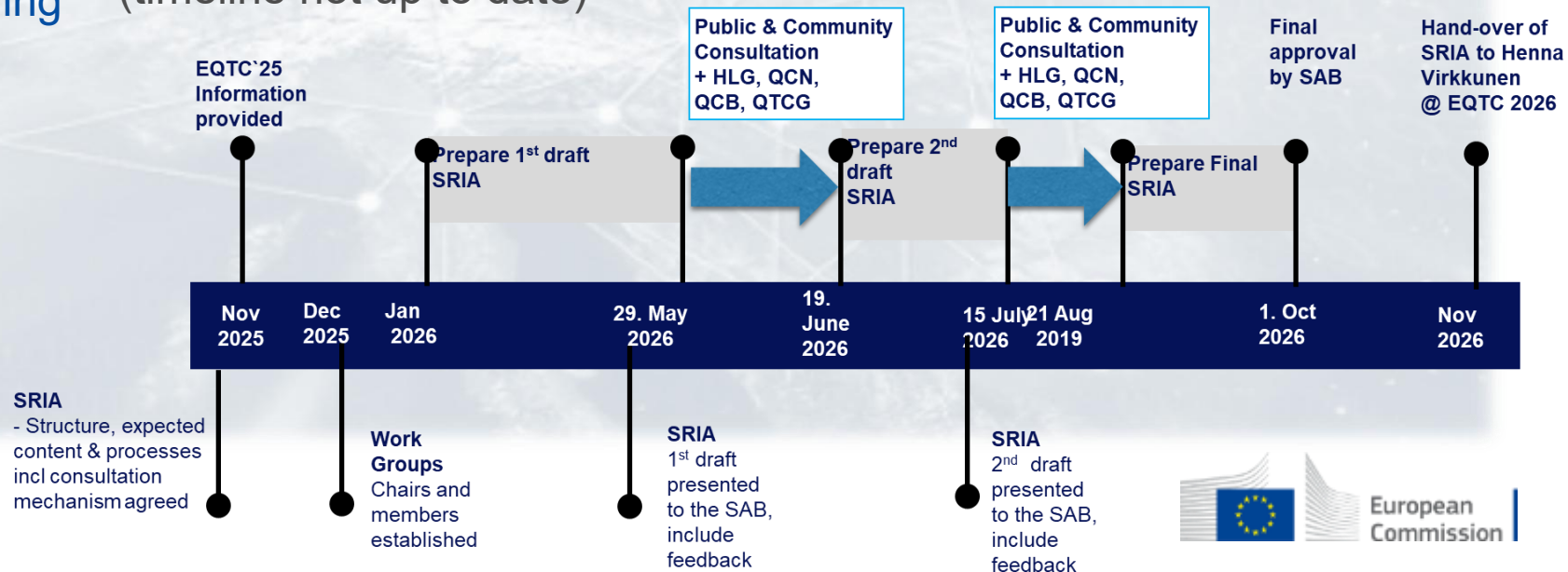
- EU Quantum Computing & Simulation
- Quantum Communication
- Quantum Sensing / Space & Defence Quantum-Sensing
- Quantum Chips Industrialisation
- Quantum Supply Chain & Enabling Technologies
- European Quantum Standards
- European Armament Tech Roadmap [DG DEFIS]

Inputs coordinated through the CSA

SRIA update process (timeline not up to date)




Be part of the process: A plan for creating various roadmaps was outlined at EQTC 2025 last week – including an updated Strategic Research and Industry Agenda – with experts warmly invited to contribute.




From Strategy to Delivery: Quantum Act

Quantum Act

 **Why now:** Global race, security, competitiveness

 **Starting point:** Strong science, weak scale-up

 **What it does:** Align, invest, deploy, secure



Quantum Act



Cut fragmentation: Align MS priorities, funding, delivery.



Create demand: Mobilise anchor users, first deployments.



Accelerate industrialisation: Speed lab-to-fab, full-stack readiness.



Strengthen resilience: Map dependencies, monitor risks, mitigate.



Trust & usability: EU benchmarking, standards, certification.



3 pillars from QES challenges



Cut fragmentation



Create demand



Scale and secure value chain



What success looks like (by 2030)



EU-scale platforms & suppliers across stack.



Routine hybrid use in key sectors.



Reduced choke-points, trusted standards.



Near-term delivery (2026–2028)



Act proposal + governance set-up.



First EU-wide demand actions / deployments.



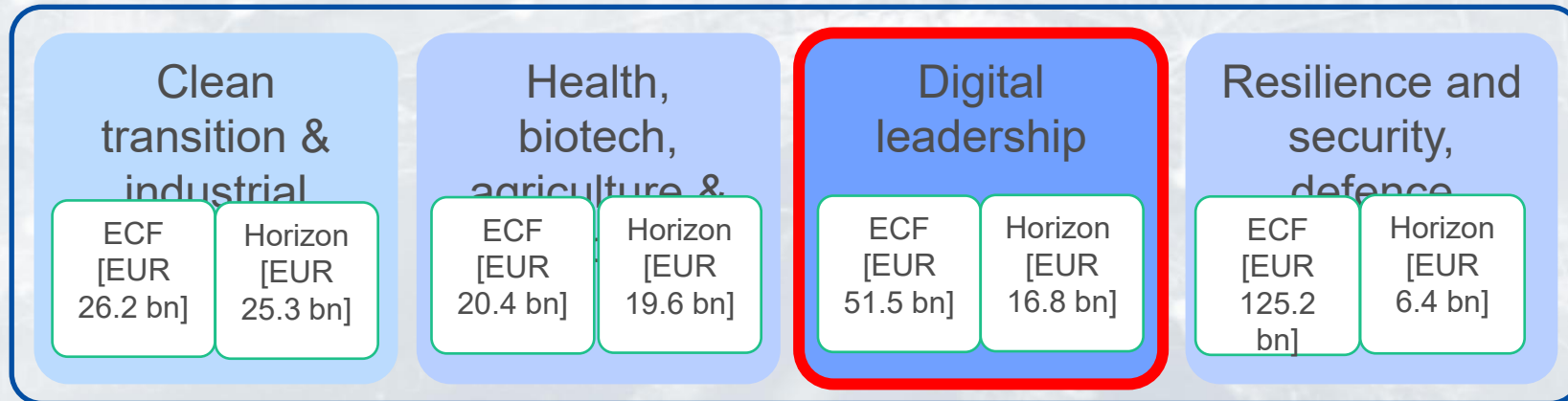
Supply-chain risk assessment + mitigation plan.



Standards roadmap & testbed ramp-up.

European Competitiveness Fund/FP10-Horizon

- **Digital Leadership:** state of the digital decade 2025 highlight the urgent need to foster cooperation and increase public and private investments for strengthening Union's digital leadership, sovereignty and inclusiveness
- Supported by sector specific policies such as:
 - Quantum Strategy
 - Quantum Act



Now Is Europe's Quantum Moment

We lead in science, let's lead in technology

- Turn academic excellence into industrial capability
- Scale European quantum startups into global champions

Strategic autonomy is a necessity

- Reduce dependency on non-EU suppliers
- Secure critical quantum infrastructure under EU control

A united EU quantum ecosystem is essential

- Coordinate research, deployment, and skills across Member States
- Integrate start-ups, industry, and public stakeholders

Together, we build Europe's digital and industrial future

- Quantum is key to Europe's technological sovereignty
- Foundation for trusted AI, secure communications, and deep tech leadership

Need to invest in the European Quantum Ecosystem

- Industrialisation is the key for a consolidated quantum ecosystem



We lead in science –
let's lead in tech



Strategic autonomy
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Thank you

