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INTER-REP 86**

**NOTE**

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From:	General Secretariat of the Council
To:	Delegations
Subject:	Presentation by European Quantum Industry Consortium (agenda item 3.) at the Working Party on Competitiveness and Growth (Industry) on 15 July 2025

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Delegations will find attached a presentation by European Quantum Industry Consortium, with a view to the discussion by the Working Party on Competitiveness and Growth (Industry) at its meeting on 15 July 2025.

This document contains a presentation by an external stakeholder and the views expressed therein are solely those of the third party it originates from. This document cannot be regarded as stating an official position of the Council. It does not reflect the views of the Council or of its members.

## European Quantum Industry Consortium (QuIC)

Europe's largest quantum  
industry association

**Dr Thierry Botter**

Executive Director, QuIC

15 July 2025

Council's Working Party on  
Competitiveness and Growth (Industry)



# The Key Take-away from Today

From QuIC for the Council's Industry Working Party



Commercial Quantum Technologies is now!

Europe has the talent and skills to lead the world in quantum.

*Immediate and significant EU-wide industrial and investment policies needed to create the "Airbus of Quantum".*

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204 Members and Affiliates

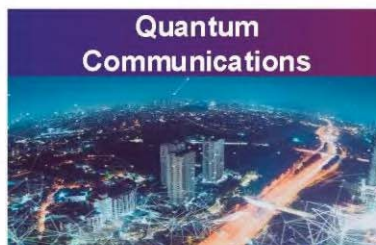
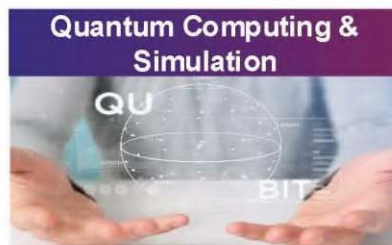
162 members from 20 EU Member States

33 members from other European nations

9 Affiliates from 5 world countries



# Work Groups & Expert Groups @ QuIC



**Strategic Industry Roadmap –** Collective perspectives from all WGs and EGs. SIR is shared with European Commission and governments across Europe to inform quantum policies.

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# QulC involvement in EU initiatives



Partner in project QUCATS, which coordinates and supports the **European Quantum Flagship**.

Member of the **Strategic Advisory Board** to the European Commission on quantum technologies.



Private Member of the **EuroHPC Joint Undertaking** (JU) governing board.

Member of the **Research & Innovation Advisory Group** (RIAG) to the EuroHPC JU.



Contributor to the EIB's **Quantum Finance Lab**.

Member of the EIC Scaling Club to support tech scale-ups in Europe.

# QulC involvement in EU initiatives



## European & Global Standardisation:

- Among select entities in EU High-Level Forum on Standardisation
- Contributor to the EU's rolling plan for ICT Standardisation.
- Links to JTC-22 & JTC-3.



## Support of EU Chips Act on quantum:

- QulC supports the Chips JU Board on quantum matters.
- Working relationship with AENEAS.



## Support of Quantum Technology Coordination Group

- EC + EU Member States alignment on quantum strategies.
- Follows from Quantum Declaration.



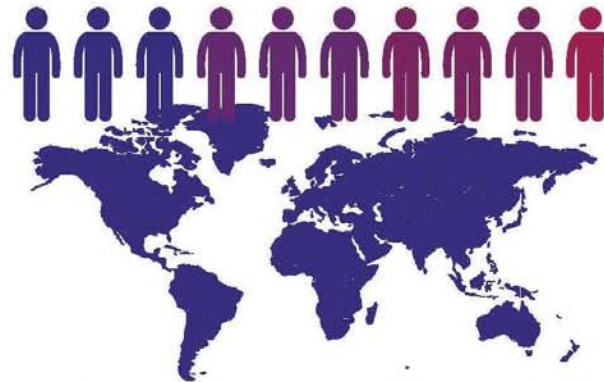
# QuIC on the global stage



## NATO Transatlantic Quantum Community (TQC)

QuIC supports the **NATO Transatlantic Quantum Community** and serves as a bridge between the European quantum industry and MoDs from Allies.

- Matchmaking Sessions
- Critical component value chain



## Trusted partner of the European Commission

QuIC supports the European Commission in its **bilateral international dialogues** with partners.

- United States of America
- Japan
- South Korea
- India



## International Council of Quantum Industry Associations

QuIC is a Founding member of **ICQIA**.

Fellow international members:

- QED-C (USA)
- QIC (Canada)
- Q-STAR (Japan)



# Quantum Tech for economic prosperity



Quantum Tech is based on properties of quantum mechanics.

- Computers
- Communications
- Sensing



## Quantum technology market size scenarios for 2035 and 2040

Based on existing development road maps and assumed adoption curve

	Quantum computing	Quantum communication	Quantum sensing
2035	\$28B–\$72B	\$11B–\$15B	\$0.5B–\$2.7B
2040	\$45B–\$131B	\$24B–\$36B	\$1B–\$6B



### Potential economic value from quantum computing in 2035

~\$0.9T–\$2T

potential economic value across four industries by 2035: chemicals, life sciences, finance, and mobility<sup>1</sup>



Source: Quantum Technology Monitor 2024, McKinsey & Co.

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# QuIC <> Defence Applications



## Advanced Quantum Clocks

Improved timing for Global Navigation Satellite System (GNSS – Galileo constellation)

Example:

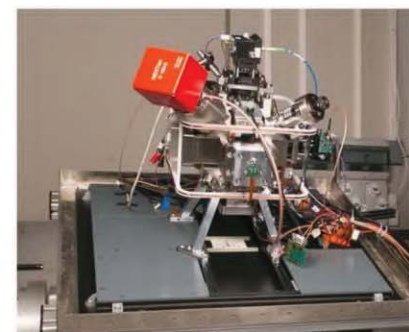
- European Project AQUaRa.

## Three-axis Q. Inertial Sensing

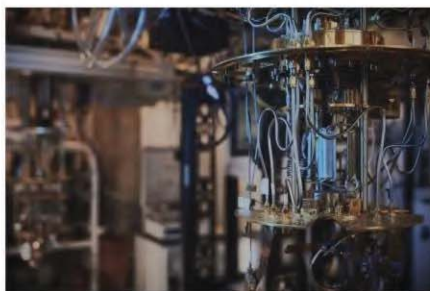
Improved navigation accuracy → step towards GNSS-free navigation

Example:

CNRS research, Exail tech.



Source: Exail – Q. sensor provider



## Quantum Computing

Development of Fault-Tolerant Quantum Computers (FTQC) for advance defence applications.

Example: PROQCIMA project led by French MoD.

## Quantum-secure Comms

Quantum computers can decrypt today's encryption  
Protect European infrastructure & citizens.

Post-Quantum Cryptography  
EuroQCI QKD Network



Source: Thales Alenia Space

# Global Public Investment Landscape

**China leads world in public spending on QT.**



Source: QURECA

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# Global Private Investment Landscape

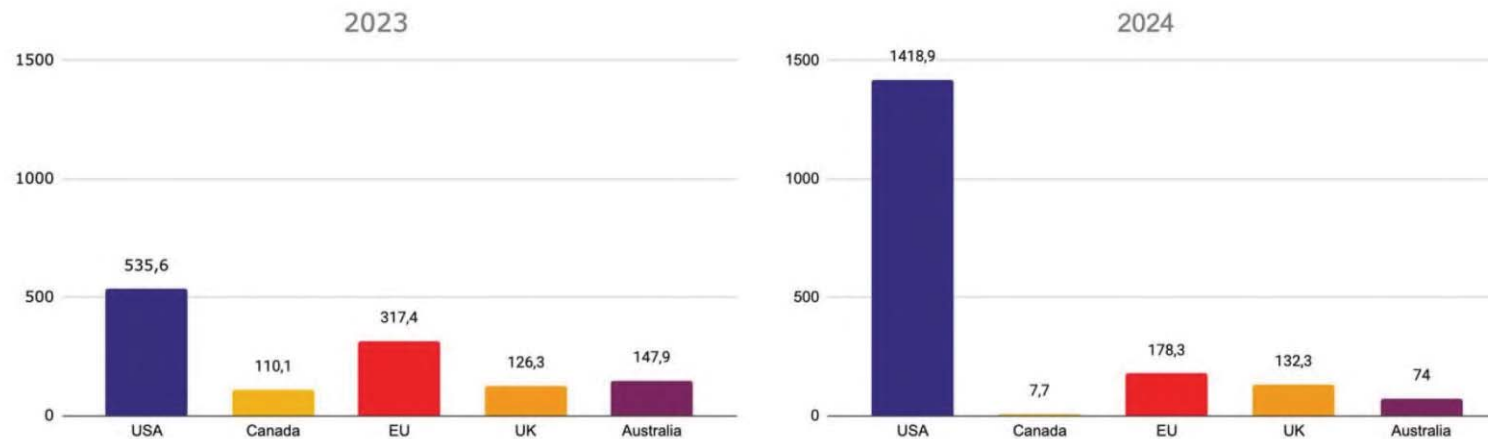


FIGURE: PRIVATE INVESTMENTS RECORDED BY GEOGRAPHICAL AREA, IN US\$M  
(SOURCE: QUANTUM TECHNOLOGIES INVESTMENT REPORT 2024, IOGS / AMIRES / SONNEBERG-HARRISON AS PART OF EU-FUNDED [QU-TEST & QU-PILOT](#) PROJECTS)

**Between 2023 and 2024, private investments in QT start-ups increased threefold in the USA while they decreased by 40% in Europe.**



# Global Investment Landscape in QTs



## QuIC Recommendations to improve private investment landscape for QT in Europe

1. **The first priority** is to **de-risk private investments in QT** start-ups and scale-ups.
  - **Quantum Start-ups:** EC establishes a ring-fenced budget for QT within the EIC work programme, and encourages the EIB, which operates the EIC Fund, *to lead or co-lead investment rounds* in quantum start-ups, rather than merely acting as a 'follower' investor, as is currently the case.
  - **Quantum Scale-ups:** substantially increase the EIC Scale Up budget in 2026 and 2027, with a portion specifically earmarked for QT. Additional measures could include the creation of a dedicated quantum scale-up fund and/or a pan-European tax relief scheme for VC funds and corporate investors backing quantum ventures.
2. **The second priority** is to **facilitate the emergence of European quantum champions** and prevent their takeover by non-EU stakeholders while allowing non-EU investors to support European companies.
3. **The third priority** is to **support the emergence of a 'second wave' of quantum champions**, particularly in areas such as *software and applications*, where North America has traditionally been stronger than Europe.

# Key Recommendations from QuIC

## For the Council's Industry Working Party



Create the “Airbus of Quantum”: EU champions that can compete on world stage.

- EU Quantum Act to establish foundations of an EU-wide industrial policy on quantum technologies.
- EU economic security: governments to support and favour intra-EU mergers & acquisitions (M&As).
  - Risk otherwise: foreign companies, esp. US companies, will acquire European start-ups to create US champions on world stage.

Significantly Improve Financial conditions for Quantum in Europe.

- Increase public funds to enable *lead* investments in EU scale-ups to rival US firms *today*.
- Rapidly adopt propositions from recent reports (e.g. Draghi report) and strategies (e.g. Savings and investments union strategy) to significantly augment private capital from Europeans invested in EU quantum tech.

Lead Market Creation: make EU-acquired systems available to private end-users.

- Commercial end-users should be offered attractive conditions to utilise and adopt publicly acquired quantum systems (e.g. attractive IP conditions for commercial R&D on EuroHPC systems) → stimulate private market.

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# QuIC <> Council's Industry Working Party proposed next steps...



## QuIC as The Voice and gateway to the broad European Quantum Industry

- QuIC keen to counsel and inform Council's Industry Working Party on needs and inputs from European Quantum Industry community ahead of upcoming EU Quantum Act.

## QuIC Position Paper of the EU Quantum Strategy

- QuIC Position Paper on EU Quantum Strategy under development – combined perspectives and recommendations of QuIC members.
  - QuIC to deliver position paper to Council's Industry Working Party when available (August 2025).

## QuIC stands ready to further support the Council's Industry Working Party

- QuIC keen to serve as aid on quantum to Council's Working Party under future EU Presidencies.

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# Thank you!

QuIC and European institutions to work together to  
**Make Europe the Global Quantum Champion**



[www.euroquic.org](http://www.euroquic.org)



[www.qexpo.org](http://www.qexpo.org)

**Strategic Partner – IQ 2025**



INTERNATIONAL YEAR OF  
Quantum Science  
and Technology



# QuIC: Top-10 Recommendations



- **Develop a European full-stack QC ecosystem**, ensuring technological sovereignty and economic competitiveness. Investments should focus on modularity, co-design, interoperability, and integration with HPC and AI.
- **Strengthen Europe's quantum supply chain** and reduce dependence on non-EU suppliers. Invest in key enabling technologies, manufacturing capabilities, and regulatory alignment to secure EU supply chain.
- **Enhance European leadership in quantum chips** through industrial-scale fabrication and testing facilities, fostering innovation in design, cryogenic electronics, photonics, packaging, and semiconductor technologies, and supporting IP generation for quantum hardware.
- **Ensure secure quantum communications and cryptography** by accelerating the deployment of PQC, QKD, and QINs. Key enablers are the funding of a certified QKD space segment and a large-scale QIN demonstrator (terrestrial and space components).
- **Drive industrialisation and market uptake of quantum sensing** by establishing an EU-wide strategy for research, commercialisation, and deployment of quantum sensors in key sectors, including defence, space, healthcare, and climate monitoring.
- **Create an attractive investment environment** for European quantum start-ups and scale-ups by addressing funding gaps, incentivising private investments, and ameliorating their competitiveness in global markets.
- **Position Europe as a leader in QT standards and intellectual property** by fostering strong European participation in international standardisation bodies and enhancing IP commercialisation incentives and mechanisms.
- **Grow a highly skilled European quantum workforce** through education, re-skilling programmes, as well as talent retention and attraction policies.
- **Ensure European quantum sovereignty** through harmonised export controls, strategic defence investments, coordination of national quantum strategies, and securing critical infrastructure.
- **Maximise QT for environmental and societal benefits** by aligning quantum research with sustainability goals, supporting energy-efficient QC, and leveraging quantum innovation for climate action and the public good.

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