ETSI's Response to the European Commission's Call for Evidence on the EU Quantum Act

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1. Executive Summary

On 29 October 2025, the European Commission released a Call for Evidence on the EU Quantum Act, aimed at advancing the key priorities of the Quantum Europe Strategy[2], which outlines Europe's ambition to become a global leader in quantum technologies. Building on its initial response to the Strategy[3], ETSI reiterates the need to address standardisation requirements for quantum technologies ahead of the Act.

2. ETSI response

The European Telecommunications Standards Institute (ETSI) welcomes the European Commission's ambition to position Europe as a global leader in quantum technologies through the Quantum Act. ETSI is both a European Standards Organisation (ESO) and a globally recognised Standards Development Organisation (SDO), supporting Europe's digital agenda and industrial competitiveness in key digital technologies, including artificial intelligence, data, cybersecurity and quantum technologies, through decades of trusted technical alignment efforts.

As the EU advances towards implementing the Quantum Europe Strategy, ETSI emphasises that standardisation is essential for integrating quantum technologies into market-ready infrastructures. By establishing robust frameworks for interoperability, security, and scalability, standards enable quantum innovation, support industrialisation, and drive market growth across the entire ecosystem, from start-ups to strategic projects. ETSI standards are globally acknowledged for their openness, impartiality, and consensus, serving both European policy objectives and the broader international community.

To deliver on this ambition, ETSI has established its new Technical Committee on Quantum Technologies (TC QT)[4], a dedicated platform developing technical standards for quantum communications, quantum sensing, quantum networks and security solutions, while also supporting supply-chain resilience[5]. TC QT operates within a unique forum that enables direct participation and brings together more than 900 member organisations across sixty-four countries on five continents. ETSI helps drive dialogue among governments, researchers, SMEs, technology companies, and societal stakeholders. It leverages ETSI's robust track record in Post-Quantum Cryptography (PQC) and Quantum Key Distribution (QKD). Going forward, this Technical Committee will foster technical collaboration with strategic European initiatives such as EuroQCI, support the industrialisation of quantum solutions, and enhance the EU's technological security.

Standardisation under ETSI's neutral governance structure safeguards European interests by aligning regional and international efforts, bridging fragmented approaches, and supporting predictable and

[1] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/15512-EU-Quantum-Act_en
[2] https://digital-strategy.ec.europa.eu/en/library/quantum-europe-strategy
[3] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14675-Quantum-Strategy-of-the-EU/F3562177_en
[4] https://www.etsi.org/newsroom/press-releases/2594-etsi-creates-new-committee-on-quantum-technologies
[5] https://www.etsi.org/committee/2600-quantum-technologies

competitive markets. TC QT will act as a catalyst for delivering "Global standards, made in Europe" ensuring that European innovations set benchmarks for worldwide quantum technology deployment.

Quantum technologies are a strategic priority for Europe. Their development will be a key driver of competitiveness across multiple sectors. To ensure leadership in this critical domain, Europe must act decisively through coordinated instruments and policies. The Quantum Act cannot be developed in isolation. It must address the cryptographic challenges of quantum computing, align with the European Roadmap[6], and recognise the complementary roles of QKD and PQC. Adopting a holistic approach that encompasses quantum-related technologies and moves toward greater technological neutrality is crucial for ensuring coherence and effectiveness.

It is essential for Europe to address fragmentation, industrial capacity gaps, and supply-chain vulnerabilities through coordinated action.

The Quantum Act should facilitate and fund technology transfer by establishing dedicated support mechanisms for:

- Standardisation activities
- Valorisation of innovation and intellectual property rights
- Certification
- Upskilling
- Technology transfer within the quantum ecosystem

3. Conclusion

In light of the foregoing, ETSI stands ready to support the European Commission and all relevant stakeholders in strategic projects, flexible industrial investments, and the accelerated deployment of quantum technologies at European and international levels. At ETSI, technical excellence, openness, inclusiveness, and global exposure converge to keep Europe at the heart of international standardisation efforts. ETSI invites the Commission to integrate standardisation as a key pillar of the Quantum Act and welcomes continued collaboration in shaping the EU's quantum future.

ETSI would be pleased to provide any further information necessary.

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[6] https://digital-strategy.ec.europa.eu/en/library/coordinated-implementation-roadmap-transition-post-quantum-cryptography