29 September 2026

How to close the funding gap to scale quantum computing in Europe

The EU needs to urgently deploy additional funding to avoid falling behind in the global race on quantum computing. Without further public support, promising European quantum companies will be forced to slow down or scale outside of Europe.

Quantum computing is a strategic technology for Europe with potential applications across security, manufacturing, health, mobility and artificial intelligence. Quantum computing could create up to $2.7 trillion of economic value worldwide by 2035 and offer more energy efficient compute for certain applications.[1]

The main challenge for the EU is funding the rapid scaling of its quantum companies. These firms need to invest billions over the next years to develop today's experimental quantum computers into systems that are reliable and powerful enough for industrial use. They also need to build manufacturing capacity to make these computers in the numbers and at the cost required to be globally competitive – all before investments generate significant returns.

This creates a funding burden that is too large for European quantum scaleups to carry alone. Further public investment is required to stimulate demand, provide growth capital and mobilise private investments.

> *"Europe attracts only 5% of the global private quantum funding, compared to over 50% captured by the USA. This funding gap is particularly pronounced at later stages of development, presenting the risk that EU startups could be acquired by non-European investors, with potential losses in IP, critical technologies, technological sovereignty and talent."*[2]

What EU policymakers should do now

1. Boost public procurement of quantum computers

The most immediate way to close the funding gap is to create demand. Public procurement delivers immediate revenue for companies, validates the technology and helps attract private investment. Manufacturers report up to a 10x multiplier in attracting private investment from product orders, suggesting a strong leverage effect for pre-commercial procurement.

[1] McKinsey Quantum Technology Monitor 2026: A commercial tipping point; available at: https://www.mckinsey.com/capabilities/mckinsey-technology/our-insights/mckinsey-quantum-technology-monitor-2026-a-commercial-tipping-point

[2] 2025 Quantum Europe Strategy: Quantum Europe in a Changing World, p. 13; available at: eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52025DC0363

DIGITALEUROPE
Rue de la Science, 37, B-1040 Brussels
+32 2 609 53 10 ▶ Info@digitaleurope.org
▶ www.digitaleurope.org
EU Transparency Register: 64270747023-20

However, the EuroHPC Joint Undertaking has warned that budget constraints create "a gap of several years" between its purchases of current and next-generation quantum systems.[3] This procurement shortfall weakens Europe's quantum scaleups exactly when international competition is accelerating.[4]

The EU and Member States must maintain a predictable pipeline of quantum computer procurement through the EuroHPC JU and national High-Performance Computing (HPC) centres. This should support successive generations of systems, not one-off purchases. Procurements should boost demand from European vendors and like-minded partners, particularly countries with established Digital Partnerships and cooperation on quantum, to leverage complementary strengths and create larger markets.

Recommended actions:

- **Provide at least €100m in additional funding to the EuroHPC JU committed to a multi-year procurement pipeline, creating demand for the next generation of quantum computers.[5] Quantum computers should be integrated into the HPC infrastructure, including the AI Factories and Gigafactories (hybridisation).**
- **Support industrial access to quantum computing via cloud access and on-premises deployment (e.g., via grants, tax credits or other de-risking mechanisms) to incentivise early adoption, create demand and strengthen European data sovereignty.**

2. Build shared quantum chip manufacturing capacity

Europe needs industrial-scale quantum chip fabrication to compete globally, but building this capacity is highly capital intensive. Public support is necessary to bridge the gap from lab to commercial production.

The US is already ahead with a $1bn award to IBM to create a quantum wafer foundry serving multiple vendors. The US government has also provided GlobalFoundries with a $375m grant and 1% equity investment to develop manufacturing capabilities across multiple quantum chip technologies.[6]

The EU's existing quantum pilot lines are too small, fragmented and research-oriented to provide the needed manufacturing capacity. What European quantum scaleups need is a commercially run foundry that provides access to the expensive manufacturing equipment and skills, enabling production across multiple quantum chip technologies. This would create economies of scale, allowing companies to bring down the cost of components while increasing the number of qubits on a chip.

In parallel, the Chips Act 2.0 should allow Member States to support the construction of first-of-a-kind (FOAK) facilities for specialised quantum chip production, where projected market demand justifies the investment. These facilities should be granted strategic project status to accelerate permitting procedures.[7]

---

[3] EuroHPC Joint Undertaking Multi-Annual Strategic Programme (2021 – 2027). 2026 Revision, p. 13; available at: https://www.eurohpc-ju.europa.eu/about/key-documents_en#multi-annual-strategic-programme

[4] By comparison, the UK in March 2026 announced £1 billion for procuring large scale quantum computers. Available at: https://www.gov.uk/government/news/uks-quantum-leap-tohelp-beat-diseasedeliver-high-paid-jobs-and-strengthen-national-security-as-first-country-in-the-world-to-roll-out-quantum

[5] This funding would allow the EuroHPC JU to co-fund a small number of additional quantum computers. For context, the Finnish government allocated €70 million in 2024 for the development of a single 300-qubit quantum computer. Available at: https://www.vttresearch.com/en/news-and-ideas/iqm-quantum-computers-supply-finland-world-leading-superconducting-300-qubit-quantum

[6] IBM and U.S. Department of Commerce Announce America's First Purpose-Built Quantum Foundry, Supported by Proposed $1 Billion CHIPS Award, available at: https://newsroom.ibm.com/ibm-and-u-s-department-of-commerce-announce-americas-first-purpose-built-quantum-foundry and GlobalFoundries launches Quantum Technology Solutions to scale U.S. quantum manufacturing | GlobalFoundries

[7] Semiconductor production facilities take on average 34 months to build in Europe. Source: Impact Assessment accompanying the Chips Act 2.0 proposal, p. 38; available at: https://digital-strategy.ec.europa.eu/en/library/proposal-chips-act-20

Recommended actions:

- **Pool EU and MS semiconductor, industrial and defence funding to support an independent European manufacturing platform serving companies across quantum chip technologies. Funding should be allocated based on excellence and industrial demand.**
- **Broaden the FOAK criterion in the Chips Act 2.0 to cover quantum chips manufacturing.**
- **Use equity investments to provide capital to quantum companies to finance strategic manufacturing capacity. An expanded Scaleup Europe Fund should provide growth capital, which would also provide exit opportunities for early investors, ensuring continued European ownership of promising scaleups.**

3. Launch an ambitious Fault-Tolerant Quantum Computing (FTQC) Grand Challenge

European companies need a long-term, milestone-based funding mechanism to scale quantum computing. A Grand Challenge with significant grants, loans and other support measures, combined with competitive down-selection, would allow the most promising technologies to progress while ensuring public money is spent on those that meet clear milestones. The Grand Challenge should start from credible platform-specific roadmaps towards commercially relevant FTQC, while ensuring that the projects address cross-cutting elements like error correction, control electronics, the development of software and algorithms, hybridisation with classical computing and interconnections required to scale quantum systems.

Funding should incentivise companies to form consortia where this makes technological and commercial sense. Consortia should remain small and agile, with IP frameworks that balance contributions fairly, allowing vendors to exploit and license results developed with public support. End-users should be involved from the start to define use cases, validate technologies and boost demand and private co-investment.

France's PROQCIMA initiative provides the template, with up to €500 million over ten years for five companies and funding linked to milestones and down-selection.[8] It is crucial that the EU at least matches the incentives offered in other jurisdictions. In September 2026, the US Department of Energy announced 10 grants of $200m each to deploy the world's first fault-tolerant, scientifically relevant quantum computers.[9]

Recommended actions:

- **Launch a Grand Challenge with long-term, milestone-based grants, loans and/or equity investments and competitive down-selection. The aim should be to provide at least €200m to each selected consortium.**
- **Ensure substantial funding for scaling quantum technologies is available from Horizon Europe and from across the European Competitiveness Fund's four funding windows, reflecting the cross-cutting contribution of quantum computing to Europe's priorities.[10]**

---

[8] Direction générale de l'armement (2024): La DGA a notifié des accords-cadres auprès de cinq sociétés pour le développement d'ordinateurs quantiques universels; available at: https://www.defense.gouv.fr/dga/actualites/dga-notifie-accords-cadres-aupres-cinq-societes-developpement-dordinateurs-quantiques-universels

[9] This is part of the US $5bn Genesis Mission. Available at: https://www.grants.gov/search-results-detail/363869

[10] For comparison, France announced an additional €1bn investment in quantum at national level in May 2026; available at: https://www.elysee.fr/emmanuel-macron/2026/05/22/forum-europeen-sur-la-puissance-de-calcul-les-sciences-et-technologies-quantiques-et-les-semi-conducteurs. Germany allocated €3bn to quantum research under its 2023–26 action plan; available at: https://www.bundestag.de/presse/hib/kurzmeldungen-956960

FOR MORE INFORMATION, PLEASE CONTACT:

Fabian Bohnenberger

Associate Director for the Single Market and Digital Competitiveness

fabian.bohnenberger@digitaleurope.org / +32 494 044753

Martina Piazza

Manager for Investments and Innovation

martina.piazza@digitaleurope.org / +32 493 09 87 41

Clara Balestrieri

Officer for Single Market and Digital Competitiveness

clara.balestrieri@digitaleurope.org / +32 490 64 63 26

About DIGITALEUROPE

DIGITALEUROPE is the leading trade association representing digitally transforming industries in Europe. We stand for a regulatory and investment environment that enables European digitalising businesses across multiple sectors and citizens to prosper from digital technologies. We wish for Europe to grow, attract and sustain the world's best digital talents, investment and technology companies. Together with our members, we shape industry positions on all relevant policy matters, and contribute to their development and implementation. Our membership represents over 56,000 businesses who operate and invest in Europe. It includes corporations and scaleups who are global leaders in their field of activity, as well as national trade associations from across more than 30 European countries.