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Call for Evidence: Quantum Act

Dear Sir or Madam,

the Austrian Federal Economic Chamber (WKO) responds to the Call for Evidence mentioned in the subject line, available at (https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/15512-EU-Quantum-Act_en), as follows:

The WKO welcomes the initiative to accelerate the research, development and industrial deployment of quantum technologies in the EU and fully shares the arguments put forward for the subject matter and the necessity of the initiative. From the point of view of the WKO, it is of fundamental importance that Europe plays a more active and visible role in shaping the future of quantum technologies. The Quantum Act should become a central part of the EU's competitiveness agenda under the next Multiannual Financial Framework (MFF) and the proposed European Competitiveness Fund (ECF), ensuring that Europe's excellent research translates into **industrial value creation, European production capacity and resilient supply chains**.

We share the assumption of the Draghi report that quantum computing will have a foundational role in next-generation digital ecosystems, with large economic and security implications.

Pillar 1 – Research & innovation framework:

Horizon Europe remains the European Union's central research framework programme and is also the flagship of European research and innovation policy in the new Multiannual Financial Framework (MFF) 2028–2034. In its proposal of 16 July 2025, the European Commission made it clear that **research and innovation should play a key role in Europe's strategic autonomy, competitiveness and resilience.**
It is **positive** to note that **Horizon Europe** will continue as a **stand-alone programme** with its own governance and budget. The name will remain as an established "brand". The Commission is proposing a significant budget increase to EUR 175 billion for the period 2028–2034 – almost double the current programme. This largely meets the WKO's demand for a budget of at least EUR 200 billion. Horizon Europe is positioned in the new MFF as one of five core programmes within Pillar 2, the European Competitiveness Fund (ECF). Together with the ECF and the Innovation Fund, it forms the core of a new European innovation budget with a total volume of around EUR 400 billion. This will create close links between research, development and industrial implementation to specifically promote strategic technologies and key industries.
The Commission clearly anchors the programme in the context of a geopolitically oriented innovation policy aimed at economic resilience, technological leadership and independence for Europe. In future, research and innovation are to contribute even more strongly to building industrial capacity in Europe, reducing dependencies and ensuring competitiveness of the internal market.

Therefore, the Quantum Act should:

- **strengthen Europe's competitiveness** and **innovation** capacity,
- **accelerate** industrial scaling and deployment of **quantum technologies**,
- support **Made-in-Europe solutions** and **reduce strategic technological dependencies**,
- **complement** and **reinforce the ECF's mission-oriented support** for deep tech and critical technologies.
- **consolidate EU and national activities** in a coherent governance structure,
- make full use of the **Competitiveness Coordination Tool** (CCT) proposed under the ECF,
- **avoid duplication** across FP10, ECF, CEF, EuroHPC, and national initiatives.

The Quantum Act should clearly **distinguish between 'must-have' quantum capabilities** that are necessary to protect existing systems, applications that primarily increase efficiency, and **more speculative 'new capability' projects**. Research funding and risk-sharing instruments should be prioritised accordingly, focusing first on those areas that directly underpin Europe's cyber resilience, critical infrastructure (protection) and defense technological resilience.

As General-Purpose Technology (GPT), Quantum Computing shall be developed for **both civil- and military applications**, as it will massively advance areas such as reconnaissance and cyber defense.

With regards to the next MFF, we expect to see a sharp increase in the funds for defense research. As already recommended in the Draghi and the Niinistö Report, **enhancing synergies between defense and civil security applications** could optimize the use of scarce resources and help close the gap with third countries.

Similarly, efforts should be made to accelerate the uptake of civil quantum innovations into security and defense applications. In addition, mechanisms should be established to **ensure that defense-funded research can effectively transition into civilian markets**, fostering both 'spinning in' and 'spinning out'. We expect the first initiative to be presented in 2026.

The academic debate predicts that quantum information science will likely shift the **cyber offence-defense balance** further towards the offence. This becomes even more true, if quantum-safe measures are not deployed early and adequately rolled out continent wide. The Quantum Act should therefore explicitly support **Europe-wide programmes** for crypto-agility, quantum cryptography roll-out and quantum-safe network architecture, including SMEs and critical infrastructure.

The current EuroHPC budget for the period 2021-2027 **is not sufficient** to keep pace with the rapid technological developments in the field of Quantum. We therefore call for the EU's share of the **EuroHPC budget to be doubled from the current EUR 3 billion to at least EUR 6 billion** in the next multiannual financial framework. Additionally, **quantum labs** or **nodes** should be developed and attached to all EuroHPC centres and public-private partnerships launched – involving large EU tech leaders as a priority – to co-invest in the whole frontier tech stack, including neuromorphic and quantum chips[1].

Europe will need **sufficient quantum engineers** who can design, operate and maintain quantum-based systems and networks. To ensure that Europe not only develops quantum technology but also deploys and governs it effectively, it is necessary to **promote dedicated education programmes** like trans-European-higher-education programmes with dedicated PhD positions in Quantum, the creation of competence centers and fostering of responsible research in higher education. The importance of responsible innovation and early work on ethics, export control and arms-control implications for dual-use quantum technologies cannot be stressed enough if Europe wants to preserve competitiveness and it's technological progress in the field of quantum.

<u>Pillar 2 - Industrial capacity & investment ('Made in the EU'):</u>

Horizon Europe provides only 10% of public funding for R&D in the EU[2]. The remaining funds come from member states and regions. There is a need to **reduce bureaucracy** and **streamline EU partnerships** and a stronger **focus on transformation** with a focus on excellent basic research and disruptive innovations like quantum technologies. **Resources** must be **better pooled at European level** and **better coordination between EU and na-**

[1] Draghi, M. (2024). The future of European competitiveness. P. 83 ff
[2] European Commission. (2025). Interim evaluation Horizon Europe.

tional funding policies must be achieved. **Strategic industrial projects of European significance**, such as the IPCEI's and public-private-partnerships, must receive targeted funding. **Public procurement** spending currently accounts for 14% of EU GDP and can be an important lever for the implementation of a coherent EU industrial policy in the digital sector[3]. European innovators are currently suffering from a lack of demand for their products. European preferences in public procurement represent an opportunity to create attractive sales markets ("lead markets") for European solutions. To strengthen Europe's technological independence, it is particularly important to use components from reliable European manufacturers for critical infrastructure and communication networks. Industrial policy under the Quantum Act should also seek to avoid lock-in to non-European providers by supporting European capacities along key parts of the value chain and by **incentivising open, interoperable architectures**.

Possible synergies **through specific measures between the digital sector and defense** with regard to **dual-use** should be examined. In order **to strengthen the potential of dual-use components**, it is essential that **companies should not be disadvantaged because their applications can potentially also be used for military purposes**. In doing so, we could see more companies embracing the potential use of dual use applications. A good step in this direction would be a further **simplification of the EIB Lending Policy**, as it currently remains restrictive for defense products. The measures announced by the EIB as part of Readiness 2030 are a **step in the right direction,** but more work needs to be done to translate the commitment of the EIB on to local banks. Moreover, it is important to communicate that these measures are not temporary but signify a long-term change of direction for the EIB.

The **European Innovation Council (EIC)** should be further developed in order to drive forward high-risk research and technology projects with disruptive potential like quantum technologies more quickly. The **deepening of the Savings and Investment Union** is indispensable for the success of the Quantum Act, as it is essential to overcome the fragmentation of the European venture capital market and ensure that companies in their growth phase have access to adequate equity capital.

From our perspective, developing European quantum innovations must mean that the EU is able to support **European quantum innovations from idea to scale (along all TRLs)**. Between 2008 and 2021, 147 "unicorns" were founded in Europe - start-ups with a valuation of over USD 1 billion. 40 of these unicorns have relocated their headquarters to a third country - mostly the USA. Only 5% of global VC capital is available in the EU, compared to 52% in the US and 40% in China[4], meaning that innovations also emerge in Europe, but cannot be scaled up. Especially in the security and defense sector (and associated dual-use components), migration to the USA means a de facto loss of control over the technology, as it would then be subject to approval under the ITAR regime. It is therefore a priority to improve the opportunities for companies to scale their ideas within Europe.

[3] European Commission. (2023). Public procurement: a data space to improve public spending, promote data-driven policymaking and improve access to tenders for SMEs.
[4] Draghi, M. (2024). The future of European competitiveness. P. 29 ff

At the same time there will be a need for a **strict investment screening** regime, especially with regards to Quantum Technology, to avoid innovation leakage abroad.

There is also a need to integrate **quantum-secure requirements into EU funding** where necessary, e.g. into IPCEIs and public-procurement criteria (cloud, telecoms, defense and space projects).

With the development of cutting-edge technology such as Quantum, comes the **increased risk for economic espionage** and foul play. Especially given the potential gains from establishing Quantum supremacy, the likelihood of third country interference is increased. A proposed Quantum Act should address this topic and either propose measures to counteract these potential disturbances or create synergies to existing initiatives such as the Security Union Strategy.

Pillar 3 – Supply-chain resilience & governance:

The current geopolitical landscape is characterised by various conflicts as well as technological power struggles. Due to the existing dependencies on non-European technology providers, efforts should therefore in principle be made to reduce the existing dependencies in all areas and to promote European cooperation. In the field of quantum technology, AI and big data, no European country can compete with the USA or China alone (for example, China is providing USD 15 billion for the development of quantum technology and the USA USD 500 billion for AI infrastructure). We see a role for the EU here in strengthening **joint cooperation between the member states**.

A proposed Quantum Act should take a holistic approach, covering not only the development and deployment of Quantum Technology made in Europe, but also secure the necessary supply chains relevant for producing these technologies in the future. Measures include both diversifying supply chains but also creating mutual dependencies with source countries to ensure leverage for continuing flow of supply.

- **Transparent industry involvement for policy decisions:** The Quantum Act should institutionalize structured involvement of industry stakeholders for any EU-Level Monitoring. Forming a formal advisory group with representatives from major quantum-tech companies, research institutions, and industry associations, and ensuring their recommendations are transparently considered in policy decisions, would help achieve this.
- **Built trust between industry and regulators**: The current reliance on ad-hoc secured emails for information sharing poses security risks, and information-sharing with third countries lacks adequate safeguards in today's geopolitical climate. To enhance data protection, a standardized, encrypted platform should be established for collecting and storing sensitive industry data, with robust cybersecurity measures. The sharing of information with third countries needs to be restricted, unless clear safeguards are in place to protect European companies' proprietary and strategic data. Companies should also have a mechanism to review and challenge information-sharing decisions that could compromise their

competitive position. Stronger confidentiality measures will encourage industry cooperation by ensuring that sensitive data is handled securely, thereby reinforcing trust in regulatory institutions.

- **Streamline the information gathering process**: The European Commission should adopt a unified, EU-wide template for supply-chain information requests, ensuring consistency in content and deadlines across Member States. This requires improvement compared to the European Chips Act. Here, information requests sent via different Member State authorities are fragmented and often lack clear objectives. Companies operating in multiple jurisdictions must respond to redundant and uncoordinated surveys with varying deadlines, formats, and questions – all without a clear understanding of how the information will be used. Going forward, information should ideally be collected through the Member State where a company's headquarters is located, and each request should clearly state its purpose, the intended use of the data, and any planned follow-up actions. Streamlining and harmonizing these requests will reduce administrative burdens, improve data quality, and enhance industry compliance.
- **Adopt a long-term strategic approach to resilience**: The emergency toolbox for the Quantum Act cannot primarily focus on short-term supply disruptions, it needs to address broader risks and security issues beyond immediate shortages. Pillar 3 should be expanded to include planning for long-term challenges such as geopolitical threats, foreign supply dependencies, technological vulnerabilities, and other security concerns. This means implementing concrete measures like incentives for scaling up domestic production of critical chips, accelerating R&D investments in next-generation technologies, securing raw material supply chains, and protecting critical know-how. European preferences for public procurement need to be a tool for Pillar 3 as well, to avoid dependencies on third countries in sensitive areas.
- **Congruency with other European Acts**: All measures to ensure supply-chain resilience in the Quantum Act should fit in and use instruments in other European Acts like the Critical Raw Materials Act, the European Chips Act, the FDI-screening regulation, export control regulations or possibly the Net-Zero Industry Act.

General remarks:

- **Identify the framework conditions conducive to European high-tech innovations.** What do high-tech firms need to succeed in Europe, and why do they choose to conduct research and production there? Producing high-tech innovations, such as quantum-chips, are key to driving European productivity and growth.
- The regulatory framework should enable **innovation and production in Europe** and must not unintentionally jeopardize the competitiveness of European high-tech companies and their suppliers. Impact assessment systems need to be improved, to better gauge the cumulative effect of regulatory initiatives in areas like chemicals/materials or reporting obligations.
- **Promote partnerships along the semiconductor value chain in Pillar 2 projects.** For example, it could be incentivised to use European-made, Chips Act-

financed chips in key applications and strengthen vertically integrated collaborations with Europe's semiconductor or software ecosystem.

- The **communication and collaboration** between DGs in Bruessels and member-states should be **institutionalized**, to identify synergies in other policy-making areas.
- **Combine efforts with other programs**: Complementary EU funding instruments (such as the Connecting Europe Facility, and regional development and cohesion funds) should support large strategic projects like design and production facilities, if additional infrastructure is needed – like water or energy supply, social infrastructure (schooling and housing for workers), digital networks, or other physical infrastructure.

Queries:

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Kind regards

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