QUTAC position paper on the EU Quantum Act

QUTAC welcomes the drafting of the EU Quantum Act to implement the Quantum Europe Strategy. Quantum technologies—specifically quantum computing, quantum sensing, and quantum communication—are laying out the foundation for sustainably increasing competitiveness, value creation, and strengthening technological sovereignty in Europe. As an industry-driven initiative, we see it as our task to support the implementation of the EU Quantum Act with practical recommendations and contributions. Our goal is to help shape the European Commission's ambitious plans so that Europe becomes one of the international pioneers in quantum technologies and asserts its role in global innovation competition.

- Speed is of utmost importance: Speed matters because quantum is entering a window where leadership can “lock in” for a decade or more. If Europe moves too slowly, it risks becoming a buyer and rule taker in a field that will underpin security, competitiveness and entire supply chains. Therefore, Europe needs to focus on streamlined research & innovation frameworks by reducing bureaucracy and the number of stakeholders to be consulted to a minimum. The larger the number of stakeholders to align with, the slower we become. If we do not manage to develop competitive quantum technologies in Europe, we won’t need to care about supply chain resilience.

- Industrialization as major challenge: The EU Quantum Act must address the clear gap between research and industry application. To solve this, players who immediately feel economic pain must be the key contributors. With pilot lines mainly at Research and Technology Organisations, industrialization will not be achieved. Only established industry can provide a customer-oriented access model, which paths the way for industrialization. Also, it is important to consolidate the research strengths in application-oriented technology hubs. To ensure continuous and cost-efficient progress, it is essential that the clusters are institutionally anchored within existing national and European ecosystems. Existing bilateral and multilateral

collaborations (e. g. the Franco-German dialogue on quantum technologies) should be continued and developed further.

- Steer investment into quantum technologies: To further support the development of the European quantum ecosystem, it is important to recognize the role of governments as anchor customers. Additionally, there is a drastic need to increase private funding. Venture capital should be tailored to the requirements of quantum start-ups and scale-ups. Sufficient funding must be made available, and this must be used in a targeted manner. Funding should be targeted at areas where the chances of success are particularly high. This enables existing resources to be utilised effectively. Industrial applicability should always be a central criterion in order to avoid diversifying the funds too widely. This requires prioritization, avoidance of duplication of work, use of existing elements, and regular evaluation and coordination of member state and EU programmes.

- Secure long-term expertise: In order to secure expertise in the long term, more professorships and research groups in the field of quantum algorithms are needed, as well as targeted programs for attracting talent. Practice-oriented continuing education programs, including dual formats, are crucial for training skilled workers in line with demand. Continuous, structural cooperation between industry and universities is essential for this.

About QUTAC

Since 2021, leading German and European companies have come together in QUTAC to jointly promote the use of quantum technologies in industrial applications and influence hardware and software development. QUTAC now represents 14 large corporations, which together generate annual sales of approximately €1.05 trillion and employ more than 2.3 million people worldwide. In QUTAC, the companies are conducting joint research into the application of second-generation quantum technologies in industrial products and processes in order to prepare for this technology as early as possible and leverage its economic impact.

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