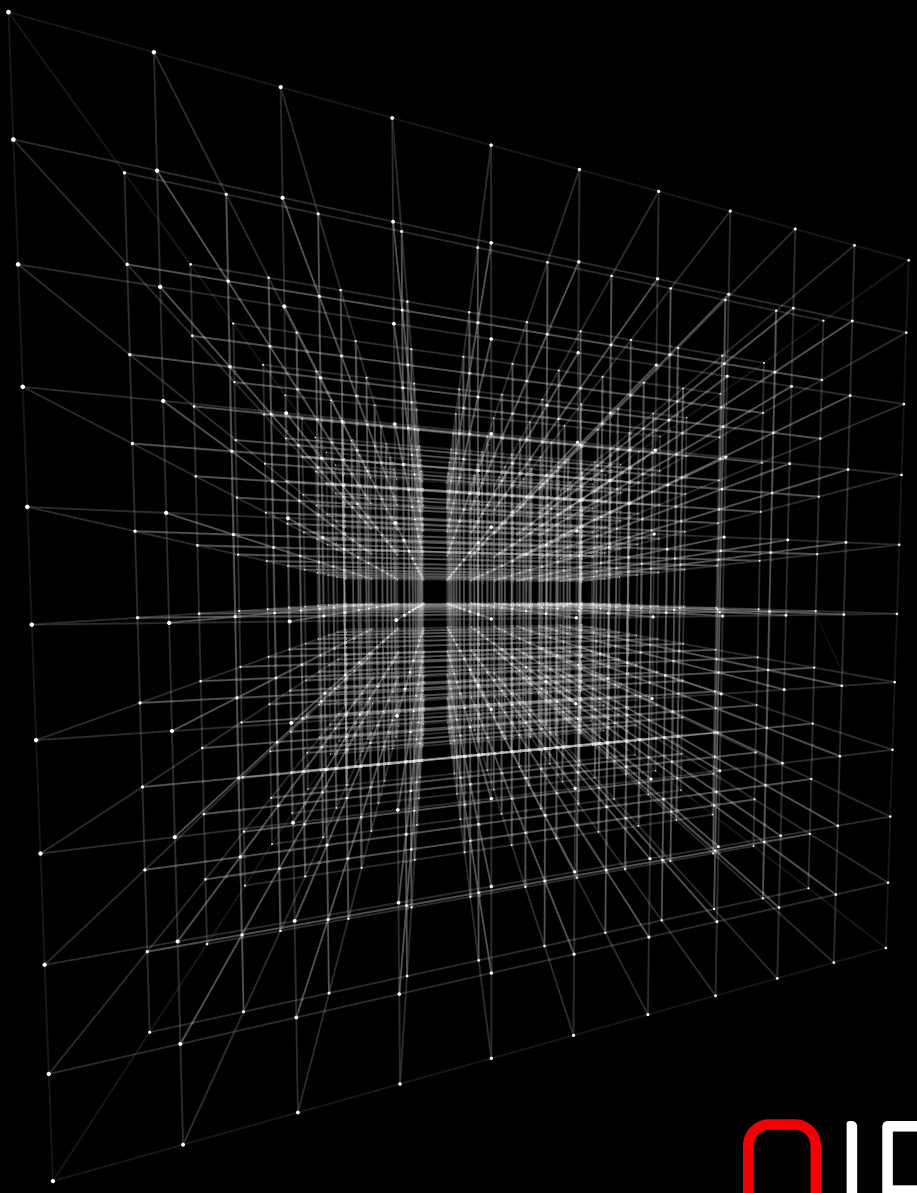

QIR

Quantum Index Report 2025

MIT INITIATIVE ON THE DIGITAL ECONOMY

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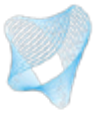
Interactive website and public data

The Quantum Index Report 2025 is accompanied with interactive tools available on our website (qir.mit.edu) and we share our raw data with the community available to download from our website (qir.mit.edu/data).

In memory of Shawneric Hachey, whose unique talent and dedication shaped the way this project is presented today.



Center for Quantum Networks
A National Science Foundation Engineering Research Center

accenture

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This research is a collaboration between Accenture and the MIT Initiative on the Digital Economy (IDE) and was performed under the MIT and Accenture Convergence Initiative for Industry and Technology.

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3 | Venture Funding

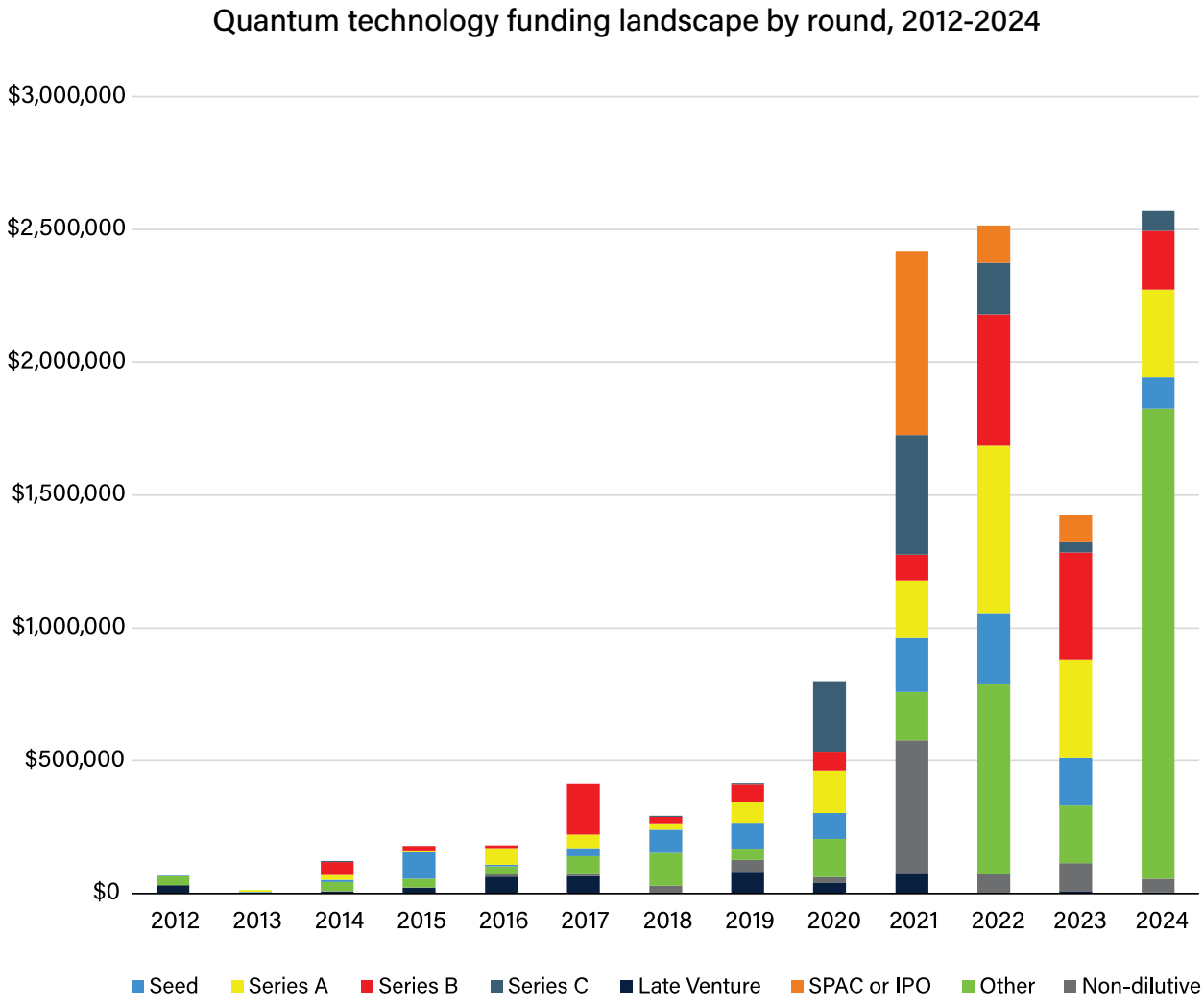
Financial investment is a critical resource for the development of early stage quantum firms. The embryonic profile of the technology, the field's inherent complexity, and the long-term nature of its development generally make it more suitable for specialist, patient investors.

Our data, compiled in collaboration with Accenture and The Quantum Insider, focuses mainly on publicly available funding announcements from open media sources (press releases, articles, etc). Not all entities fully disclose their funding details, and challenges remain in terms of data gathering and classification (e.g. "Other" category in 2024 data on page 42). Investment levels within large companies such as Google, IBM, Microsoft, or Amazon are not known—and these are some of the largest scale actors in the space.

Within our dataset, total funding for quantum technologies first peaked in 2021. Although there was a decline of approximately 40% in 2023, the sector quickly recovered and reached a new peak in 2024. Quantum computing firms have generated the highest share of overall funding compared to other quantum technologies such as quantum communications and security firms (e.g. quantum networking) and software firms (e.g. quantum algorithms). Despite the growth in recent years, quantum technology investment still represents only a tiny fraction of total venture funding (<1%).

Despite the growth in recent years, quantum technology investment still represents only a tiny fraction of total venture funding (<1%).

3.1 | Quantum technology funding landscape by round



* The 'Other' funding category encompasses a wide variety of investments that either did not fit discreetly into the standard classification groups or was not precisely reported. Individual investments are sometimes complex and opaque as companies may secure funding from multiple sources simultaneously which have different terms and structures. There are also a wide variety of sources including government, institutional, traditional venture capital, grant aid, or quasi-debt. Due to the evolving nature of quantum funding structures in 2024, a number of transactions that might otherwise be categorized under 'Late Venture' have been included in 'Other' to maintain consistency with earlier data and emerging patterns.

The quantum technology funding landscape has undergone multiple transformations over the past decade, marked by periods of explosive growth punctuated by strategic corrections. The journey began with modest investments in 2012, followed by rapid acceleration in 2014, establishing the foundation for future growth.

After a brief correction in 2018, the sector entered a new phase. 2019 marked a recovery. The significant inflection point in the market occurred in 2020 when total funding approximately doubled compared to the previous year. This continued in 2021 when it roughly tripled again. Spikes in 2021 and 2022 were somewhat driven by quantum computing companies going public in the form of Special Purpose Acquisition Companies (SPACs). These are atypical funding vehicles that are unlikely to occur on a regular basis going forward. Significant SPAC examples included IonQ and Rigetti in 2021 and D-Wave in 2022.

Quantum technology funding has shown remarkable growth and diversification across various investment categories from 2012 to 2024. The total quantum technology investment landscape is dominated by "Other" funding sources, which account for 30% of all investments, followed by Series A funding at 17% and Series B at 14%. Seed investments represent 10% of the total funding, while Series C rounds contribute 9%, and SPAC/IPO activities account for 8%. Non-dilutive funding and Late Venture investments make up smaller portions at 7% and 4%, respectively.

Non-dilutive funding has grown substantially over time, increasing from minimal amounts in early years to reach significant levels, with its highest point at $500 million in 2021. SPAC/IPO activities, while less frequent, represent major funding milestones, with investments reaching $693 million in 2021.

This evolution might reflect the maturation of quantum technology companies, transitioning from early-stage venture funding to later stage capital structures. The sector has demonstrated substantial resilience, with each temporary downturn serving as a stepping stone for a rebound and further growth.

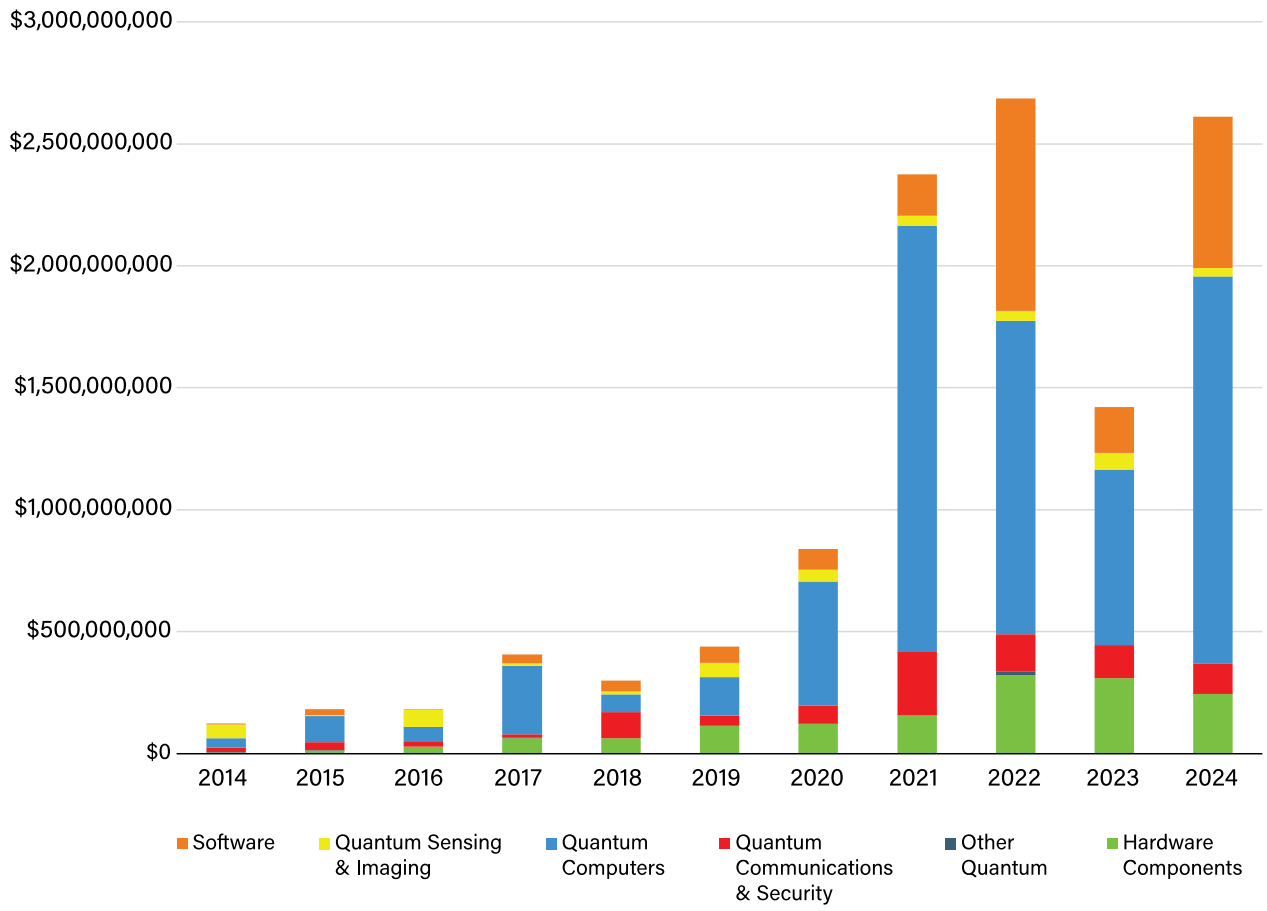
3.2 | Quantum technology venture funding by category

The quantum technology sector has experienced significant shifts in investment patterns over the past decade. Quantum computers have generated the highest share of overall funding compared to other technologies such as quantum networks and software.

The data shows strong growth in 2024, particularly amongst Quantum computing firms which received $1.59 billion in investments across the year. Quantum software investments also showed remarkable growth in 2024, reaching $621 million.

Several major investments during 2021-2022 marked significant milestones in the sector's development. In January 2021, Quantinuum secured a $300 million equity

Quantum technology funding landscape by category, 2014-2024



investment, achieving a pre-money valuation of $5 billion.[1] This round drew participation from prominent investors including JPMorgan Chase, Mitsui & Co., Amgen, and Honeywell. Later that same year, PsiQuantum attracted $450 million in funding from Temasek, BlackRock, Microsoft, and other strategic partners.[2]

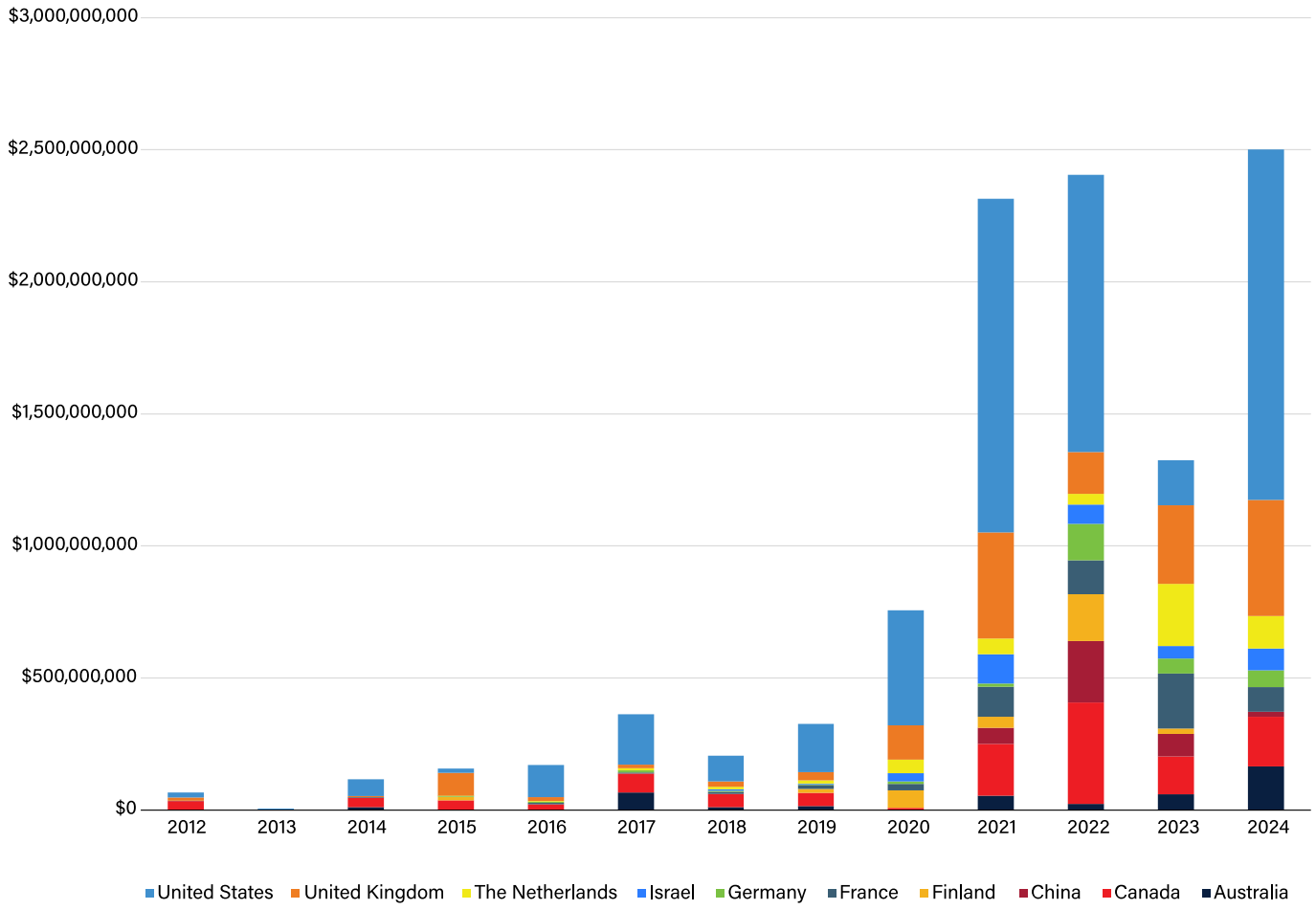
In 2022, Finland-based IQM Quantum Computers raised €128 million including a venture loan from the European Investment Bank and participation from World Fund, Bayern Kapital, and Tencent.[3] IQM provides full-stack quantum computing systems to supercomputing data centres, research institutes, universities, and enterprises.

More recently, in April 2024, the Australian Commonwealth and Queensland Governments made a substantial commitment to the sector, investing $620 million in PsiQuantum through a financial package consisting of equity, grants, and loans to support the development of a utility-scale quantum computer.

3.3 | Quantum technology funding landscape by countries

The global quantum technology funding landscape has evolved into a significant international competition, with multiple countries making substantial investments to secure their position in this emerging field.

Quantum technology funding landscape by top 10 countries, 2012-2024



The United States and United Kingdom lead the field with a combined share of more than 60% of total funding across 2012 to 2024. The US headquartered firms secured $4.94 billion, followed by UK ventures at $1.6 billion. Canada ranks third with $1.2 billion. At the next level down, France ($606 million), the Netherlands ($540 million), Australia ($412 million), and China ($398 million) form a middle tier, while Israel ($352 million), Finland ($334 million) and Germany ($303 million) are clustered just behind.

The funding history over time shows that most countries maintained very modest but relatively stable investment levels until 2016, after which they adopted either steady growth trajectories or pursued clear bursts of increased funding.

The recent growth patterns reveal a different dynamic between established and emerging players. While the major nations maintain substantial absolute funding levels, several smaller nations demonstrate remarkable growth trajectories. Australia leads with the highest growth rate, reflecting an assertive investment strategy with substantial government support. In contrast, despite their larger absolute investments, the US and UK demonstrate more moderate growth in recent years. This suggests that while established powers maintain their position through sustained investment, smaller nations are dedicated to closing the gap through accelerated funding increases.

The consistent upward trend in investment across a wide range of nations in recent years indicates growing global recognition of quantum technology's strategic importance as well as the desire to build firms that can translate scientific research efforts into commercial success.

3.4 | Future research

Given the relatively small annual volume of quantum venture deals internationally, there will be gaps in reporting. Improving data gathering is an opportunity for the community in general. If you have data that would aid this endeavor and enrich future Quantum Index Reports please contact the QIR team.

Building on our analysis, several important research areas emerge for future investigation, including cross-country comparative studies to investigate the relationship between basic science investment, workforce development and startup emergence in quantum (linkages between research, talent and capital), investment impact analysis to quantify relationships between funding patterns and delivery of technological milestones, and the role played by corporate and strategic investors.

You can reach us at contact@qir.mit.edu.

Footnotes

[1] 'Honeywell Announces the Closing of $300 Million Equity Investment Round for Quantinuum at $5B Pre-Money Valuation' <https://www.quantinuum.com/press-releases/honeywell-announces-the-closing-of-300-million-equity-investment-round-for-quantinuum-at-5b-pre-money-valuation> accessed 28 March 2025.

[2] 'PsiQuantum Raises $450 Million to Build Its Quantum Computer' (PsiQuantum) <https://www.psiquantum.com/news-import/psiquantum-raises-450-million-to-build-its-quantum-computer> accessed 3 April 2025.

[3] 'European Quantum Computing Leader IQM Raises €128m Led by World Fund to Help Combat the Climate Crisis | Press Releases IQM' <https://www.meetiqm.com/newsroom/press-releases/european-leader-in-quantum-computing-iqm-raises-128m-led-by-world-fund> accessed 3 April 2025.

11 | Appendix

Chapter 3 | Venture funding

This data was gathered by Accenture in collaboration with The Quantum Insider (TQI) using The Quantum Insider Funding Database. The methodology and limitations are explained below:

Funding numbers are obtained from open media sources (press releases, articles, etc). For example, Riverlane funding round: https://www.riverlane.com/press-release/riverlane-raises-75-million-to-meet-surging-global-demand-for-quantum-error-correction-technology.

Where possible TQI emails the companies to validate if they are missing investors or details. Not all companies disclose the size of funding rounds (e.g. QEDMA shows as $4.7 million seed but they haven't publicly disclosed their top up round so they have asked not to be included in the dataset). Based on this, there will be gaps in reporting and the data should be viewed as indicative rather than complete.

Chapter 4 | Quantum in corporate communications

The data was collected by Accenture through AlphaSense on 10th March 2025 using keyword search term "quantum computing." The documents presented in this section include five categories, (1) Company Documents consisting of US Filings, Global Filings, Company House Filings, Private Company Filings, Event Transcripts, ESG, Thought Leadership, Other Company Publications; (2) Research Documents consisting of Broker Research, IDC Research, Consultancy Research, Broker Feed; (3) Transcript Documents consisting of Event Transcripts; (4) News Documents consisting of Financial Times, Market News, General News, Trade Publications, RSS Feeds, LexisNexis, (5) Expert Call Documents consisting of Expert interviews.

Chapter 5 | Policy

The policy research was completed through comprehensive desk research specifically designed to capture the rapidly evolving landscape of quantum technology initiatives across multiple countries, including detecting and analyzing the national strategy documents and implementation plans, which involved cross-referencing multiple official sources and analysis of policy implementation progress.

Quantum Index Report 2025

MIT Initiative on the Digital Economy

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