

THE PRC INVESTS IN QUANTUM TECHNOLOGY

Massive investments in quantum technology by the People's Republic of China (PRC) and its burgeoning efforts to shape international quantum standards pose a growing threat to non-PRC companies' market share.

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The Chinese Communist Party (CCP) publishes "Made in China 2025," a strategic plan that calls for capturing global market share through technology transfer and industrial subsidies.

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The "China Standards 2035" initiative is launched to create a blueprint for the government and leading companies to set global standards for emerging tech.

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By 2021, the PRC has invested more than \$10 billion on quantum development, roughly half the world's total spending. PRC quantum technology patents total more than 600 between 2012 and 2019, with the US patenting around 400.

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QuantumCTek, a leading PRC quantum information technology company, is added to the US Entity List for acquiring US-origin technology in support of PRC military modernization efforts.

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QuantumCTek announces that two international organizations have accepted a QKD standards proposal that it drafted with the China Information Technology Security Evaluation Center (CINITSEC), an organization controlled by a PRC intelligence agency.



Strider's **Risk Intelligence** helps companies understand which technologies and personnel are at risk of being targeted by state-sponsored actors. It also identifies the movement of incoming and outgoing talent across their organizations and industry.



Strider delivers insights across the quantum technology sector and illuminates relationships between critical actors, including research collaboration patterns.

The PRC is seeking to dominate the growing international market in quantum computing and communications.

Strider helps companies protect their quantum technology and revolutionizes the way they compete in the new era of global competition.

A Closer Look

Massive PRC government investments in quantum technology, targeted exploitation of foreign research institutions, and burgeoning efforts to shape international quantum standards pose a growing threat to non-PRC companies' future market share. In 2015, the Chinese Communist Party (CCP) published "Made in China 2025," a strategic plan and industrial policy strategy that, among other goals, called for the PRC to capture global market share through technology transfer and industrial subsidies.

- The drive from the PRC to dominate the future of quantum is being fueled by government subsidies that dwarf the investments seen in other countries. By 2021, for example, the PRC had spent more than \$10 billion, roughly half the world's total, while the U.S. invested \$4.5 billion and the EU \$1.4 billion. The disparity in funding has resulted in a comparable innovation imbalance, with the PRC patenting more than 600 quantum technologies between 2012 and 2019 and the U.S. patenting around 400.
- The strategy to exploit foreign research institutes includes sending scientists to top quantum labs around the world for training and then recruiting them through government talent programs and funding to support the development of the PRC's quantum programs. The same scientists often simultaneously collaborate with state-owned defense companies in the PRC.

The PRC seeks to dominate the future global quantum computing market

Beijing is seeking to gain international adoption of quantum key distribution (QKD) standards to drive global demand for PRC technology. In 2018, the "China Standards 2035" initiative was launched to create a blueprint for the PRC government and leading companies to set global standards for emerging tech.

- In October 2022, QuantumCTek, a leading PRC quantum information technology company, announced that a joint committee of the International Organization for Standardization and the International Electrotechnical Commission accepted a QKD proposal that it drafted with China Information Technology Security Evaluation Center (CNITSEC).
- In 2021, the United Nations' International Telecommunications Union "consented" to a QuantumCTek QKD security proposal.
- QuantumCTek was added to the US Entity List in 2021 for acquiring and attempting to acquire US-origin technology in support of PRC military modernization efforts. CNITSEC is controlled by a PRC intelligence service. Both organizations are part of an expansive ecosystem that includes academic and research institutions and the military.

Strider helps companies seeking to compete in the quantum technology market of the future by protecting their innovations and talent and helping them understand the global quantum technology landscape.

- Strider's Risk Intelligence helps companies understand which of their technologies and personnel are at risk of being targeted by the PRC. It also identifies the movement of incoming and outgoing talent across their organization and industry.
- Strider delivers insights across the quantum technology sector. It illuminates relationships between key actors, including research collaboration patterns.