

# HSBC becomes first bank to join the UK's pioneering commercial quantum secure metro network

- HSBC is the first bank to join BT and Toshiba's pioneering commercial quantum secure metro network, working in collaboration with Amazon Web Services (AWS).
- Using Quantum Key Distribution, HSBC is connecting their global HQ in Canary Wharf and a datacentre in Berkshire to explore how this technology can defend against future cyber threats and quantum attacks.

**LONDON, 5 July:** HSBC is the first bank to join BT and Toshiba's quantum-secured metro network - connecting two UK sites using Quantum Key Distribution (QKD) to prepare its global operations against future cyber threats. This technology will be trialled in multiple scenarios, including financial transactions, secure video communications and one-time-pad encryption, as well as AWS edge computing capabilities using an AWS Snowball Edge device.

HSBC will trial the quantum secure transmission of test data over fibre-optic cables between its global HQ in Canary Wharf and a data centre in Berkshire, 62km away. QKD is an important technology that uses particles of light and the fundamental properties of quantum physics to deliver secret keys between parties. These keys can be used to encrypt and decrypt sensitive data and are safe from eavesdroppers or cyber-attacks by quantum computers.

## **CEO of HSBC Bank Plc and HSBC Europe, Colin Bell said:**

"Our customers, clients and employees expect us to have safe and secure operations and resilient cybersecurity, so we must stay ahead of the curve.

"That is why we are already preparing our global operations for a quantum future. We are spearheading industry-leading trials, recruiting highly trained experts, and investing in strong, strategic partnerships to explore how we could deploy these technologies as they develop.

"Today's milestone proves the importance of collaboration and demonstrates the significant innovation and progress that can be achieved when industry leaders join forces."

The insight generated by HSBC's exploration of quantum-secure communications could have far-reaching implications for the bank - providing crucial evidence into the advantages of quantum technology and driving the development of applications in financial cybersecurity.

HSBC's quantum scientists, cyber-crime experts and financial specialists will be better able to analyse the potential threat posed by powerful quantum computers and devise strategies to safeguard sensitive information.

In the future, experts predict QKD will play a key role in protecting financial transactions, client data and proprietary information across the financial sector. HSBC processed 4.5 billion payments for their customers last year, worth an estimated value of £3.5 trillion. These electronic payments rely on encryption to protect customers and businesses from cyber-attacks.

HSBC's quantum strategy includes trials of Quantum Key Distribution (QKD) and Post Quantum Cryptography (PQC). HSBC is also exploring applications in quantum computing across optimisation, simulation, and machine learning.

**BT Chief Security and Networks Officer Howard Watson said:**

"As the UK's leading network provider, it's critical we ensure our digital infrastructure remains secure against new quantum-based threats. Having launched the world's first trial of a commercial quantum-secured metro network in partnership with Toshiba, we are delighted that HSBC has become the first bank to join.

"This trial enables global industry partners to collaborate on the next era for network security. We look forward to co-innovating to develop and prove further use cases, demonstrating the power of quantum communications in the UK and worldwide. "

**Shunsuke Okada, Corporate Senior Vice President and Chief Digital Officer, Toshiba Corporation said:**

"Toshiba has been supporting the advancement of quantum technologies for more than 30 years, including the development of our QKD quantum-safe security solution.

"Collaboration and partnerships play a key role in this. The commercial trial – which brings together Toshiba's QKD technology, AWS' edge compute services, and Toshiba and BT's quantum secure metro network, will deliver secure and effective communications for HSBC.

"This quantum-secured connection that leverages AWS edge compute services in a commercial network represents a milestone moment in the adoption and commercialisation of quantum-secure networks. We look forward to working with HSBC to keep their customers' data safe and continue applying quantum technologies to real-life use cases."

**AWS Vice President of Engineering Bill Vass said:**

"Quantum Networking is a core pillar of AWS's quantum strategy to explore quantum technologies and bring new solutions to customers. This proof-of-concept is an exciting and important step toward understanding the commercial viability and scaling required to move quantum networking forward from the lab to the real world.

"HSBC is a great example of an innovator preparing for the quantum era. By investing in and developing quantum-resistant cryptography strategies today, they are laying the groundwork to establish highly secure communication approaches for the future and keeping data security a top priority for customers."

HSBC has its customers at the heart of everything they do as they strive to deliver the next generation of digital banking products and services. With their size and global reach, they deliver digital innovations for customers worldwide at speed and scale, with greater resiliency and at a lower cost. Working with influential technology organisations and ground-breaking fintechs, HSBC is playing a leading role in the evolution of financial services globally.

By harnessing the latest technology, they can better understand their customers' needs and respond to them faster - providing seamless, personalised experiences – available anywhere, anytime. They are embracing and employing digital innovation to transform banking and open a world of opportunity for customers, colleagues and the future of HSBC.

**HSBC Holdings plc**

HSBC Holdings plc, the parent company of HSBC, is headquartered in London. HSBC serves customers worldwide from offices in 62 countries and territories in its geographical regions: Europe, Asia, North America, Latin America, and Middle East and North Africa. With assets of US\$2,967bn at 31 December 2022, HSBC is one of the world's largest banking and financial services organisations.

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