



Quantum Sweden Innovation Intelligence Digest (QSIID) is a curated monthly newsletter with external quantum innovation business news from around the globe.



Rigetti UK has been chosen to lead a £3.5 million Innovate UK Quantum Missions project to advance quantum error correction (QEC) on its superconducting quantum computer at the National Quantum Computing Centre (NQCC). The effort includes upgrading to a 36-qubit QPU and integrating Riverlane's QEC stack for real-time error correction and performance improvements. Rigetti also secured funding for two more projects on scalable QEC and open-architecture testbeds, strengthening its role in the UK quantum ecosystem.

[Read more here.](#)

India and Italy signed a new scientific cooperation agreement focused on quantum technology, AI, and biotechnology. The 2025–2027 Executive Programme of Cooperation will fund 10 research mobility projects and 10 major collaborative research initiatives. This builds on over 150 past joint projects and supports a broader strategic action plan discussed by both nations' leaders at the G20 Summit.

[Read more here](#) and [here.](#)



HRL Laboratories and Boeing have built and validated a quantum communication subassembly for the Q4S satellite mission, aiming to demonstrate four-photon entanglement swapping in space. The system achieved high-fidelity entanglement and detected over 2,500 photon pairs per second, meeting key targets for space-based quantum networking. Now flight-ready, the subassembly will also serve as a ground twin to support secure quantum communication efforts in orbit.

[Read more here.](#)

NASA's Jet Propulsion Laboratory is developing the Quantum Gravity Gradiometer Pathfinder (QGGPf), the first space-based quantum gravity sensor. It uses ultra-cold rubidium atoms and atom interferometry to detect gravitational anomalies with up to 10 times more sensitivity than classical sensors. Partnering with companies like AOSense, Infleqtion, and Vector Atomic, the mission aims to test and validate quantum sensing in space ahead of a planned launch by the end of the decade, paving the way for future Earth and planetary science missions.

[Read more here.](#)



IonQ has signed an MoU partnership with Intellian Technologies, a global provider of satellite communication solutions, with the aim to explore secure quantum networking's potential in transforming satellite communications. This move supports IonQ's efforts to collaborate with South Korea's enterprise, government, and academic sectors to advance the quantum economy. [Read more here.](#)

PsiQuantum announced a \$10.8M contract with the Air Force Research Laboratory (AFRL) to continue their partnership from 2022. This phase involves using PsiQuantum's circuit tapeout for comparative quantum circuits in their Omega quantum chipset manufacturing with GlobalFoundries. [Read more here.](#)

A recent Economist Impact survey reveals that 83% of quantum professionals anticipate quantum utility will be achieved in the next decade, despite ongoing challenges with technology, talent, and leadership. Key obstacles include error correction (82%), talent shortages (75%), and lack of executive understanding (75%). The upcoming Commercialising Quantum Global summit in London (May 13-14) will address aligning business demands with quantum progress, focusing on use cases in sustainability, energy, drug discovery, and cybersecurity. [Read more here.](#)

IBM has announced a groundbreaking quantum error correction technique termed the Gross code, which could achieve practical quantum advantage within two years. This method decreases the number of physical qubits necessary for each logical qubit by tenfold and supports a modular architecture that is simpler to produce and expand. The Gross code, a form of low-density parity check (LDPC) code, disperses quantum data sparsely to facilitate effective error detection with more straightforward hardware configurations. [Read more here.](#)

Bosch, in partnership with Element Six, is introducing quantum sensors using synthetic diamonds with nitrogen-vacancy centers to detect weak magnetic and electric fields. Bosch leads the project with Element Six owning a 25% stake. These sensors are aimed at medical, navigation, and resource discovery uses, with plans for industrial production and integration onto chips for wider deployment. [Read more here.](#)

Researchers have developed a device enabling direct communication between quantum processors, crucial for advancing practical quantum computers. Current quantum systems limit communication to "point-to-point," requiring information to pass through multiple nodes, increasing error risks. The new MIT device supports "all-to-all" communication, allowing any processor in a network to directly connect with others. This "remote entanglement" approach was detailed in a study published March 21 in Nature Physics, promising faster, less error-prone processor interactions. [Read more here.](#)

The U.S. Defense Advanced Research Projects Agency (DARPA) has chosen 18 quantum computing companies for Stage A of its Quantum Benchmarking Initiative. In this six-month phase, each company will outline its approach to developing a fault-tolerant quantum computer by 2033. Successful completion of Stage A leads to Stage B, a yearlong deep dive into research strategies, followed by Stage C, where DARPA's team will test actual hardware. The chosen companies are based across the globe and include Alice & Bob, Atlantic Quantum, Atom Computing, Diraq, HPE, IonQ, Nord Quantique, Oxford Ionics, Photonic Inc., Quantinuum, Quantum Motion, Rigetti, Silicon Quantum Computing, and Xanadu. [Read more here](#) and [here.](#)

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