Archer Materials
Technology

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ASX Announcement (ASX: **AXE**) 15 June 2026

Archer advances quantum strategy amid growing global momentum

Highlights

- Archer continues to advance its quantum technology platform across quantum computing, quantum sensing, quantum machine learning and semiconductor-enabled medical diagnostics.
- The Company remains on track toward demonstrating a working qubit by Q3CY26.
- Archer is progressing from laboratory-scale devices toward wafer-scale manufacturing using semiconductor industry-standard processes.
- The Company has completed initial full-wafer graphene manufacturing runs and has commenced testing to support the qubit manufacturability scale-up.
- The Company achieved a key milestone in its QML fraud detection project, successfully demonstrating competitive fraud detection performance on both quantum simulators and commercial quantum hardware.
- Archer is reviewing potential acquisitions of complementary products, intellectual property and technology platforms that are consistent with its quantum technology strategy.
- The Company is in discussions with several technology companies and institutions regarding potential transactions, collaborations and IP opportunities. These discussions remain incomplete, and there is no certainty that any transaction will proceed.
- Recent global investment in quantum technologies, including significant U.S. Government support for quantum computing and quantum foundry infrastructure, reinforces Archer's view that quantum technologies are becoming strategically important across computing, AI infrastructure, sensing, defence, healthcare and advanced manufacturing.

Archer Materials Limited ("Archer", the "Company", "ASX: AXE"), a quantum company developing technologies in computing, sensing, and medical diagnostics, is advancing towards wafer-scale manufacturing of its qubit technology, marking another key step in the Company's progress from laboratory-based development to scalable semiconductor production.

Archer is developing advanced semiconductor devices and intellectual property for quantum computing, quantum sensing, quantum machine learning and medical diagnostics. The Company's strategy is to build technologies that are not only scientifically differentiated but also manufacturable, scalable, and integrated into existing semiconductor and technology supply chains.

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Quantum momentum is accelerating globally

Quantum technology is attracting increasing strategic attention from governments, major technology companies, semiconductor manufacturers and investors. The United States Government has committed significant funding to quantum technology companies and quantum foundry infrastructure — a powerful signal that quantum is transitioning from a research-phase technology into a strategically critical industry.

Global investment in quantum technologies continues to accelerate as governments, semiconductor companies and major technology organisations increase investment in next-generation computing infrastructure. Archer believes this momentum reinforces the importance of developing quantum technologies that are not only scientifically differentiated but also manufacturable, scalable and capable of integration into existing semiconductor supply chains.

Key milestones delivered and targets ahead

The Company has made progress across its key quantum technology programs.

Period	Program	Milestone / Status
2024–2025	^{12}CQ qubit program	Gating behaviour and single-electron transistor devices demonstrated; electrically detected magnetic resonance (EDMR) results achieved; cryogenic TMR sensor performance demonstrated
Early 2026	QML program	First simulations and benchmarking complete. Positive initial results with testing already underway on AWS quantum hardware.
Feb 2026	Ecosystem	Emergence Quantum Phase I commenced; QMUL, EPFL, CSIRO partnerships active across hardware, sensing and software
May 2026	Manufacturing	Multiple fabrication and testing cycles completed; transition to wafer-scale, foundry-compatible manufacturing underway
2026 target	Qubit milestone	Demonstration of a working qubit by Q3CY26
2026 target	QML prototype	Full QML fraud detection prototype targeted for year-end
2026 target	Biosensor beta prototype	Deliver a prototype device suitable for external use and trials

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^{12}CQ quantum computing program

Archer continues to advance its ^{12}CQ quantum computing program through a combination of internal development activities and collaborations with technical partners. Archer's global partner ecosystem is key in progressing our programs.

The Company remains focused on achieving a working qubit milestone while simultaneously developing the manufacturing pathways required for long-term scalability. Archer has continued testing and development activities with existing collaborators and is engaging with additional technical partners that may accelerate elements of its quantum technology roadmap.

A key development since February has been Archer's increasing focus on manufacturability and scale. While demonstrating a working qubit remains an important milestone, the Company's broader objective is to develop technologies capable of supporting large-scale quantum systems using semiconductor industry-standard processes. During the period, Archer completed full-wafer graphene manufacturing runs with fabrication partners and commenced device fabrication and testing activities on wafer-scale material. This work represents an important step in moving beyond individual laboratory devices toward technologies that may ultimately support the manufacture of quantum systems containing very large numbers of qubits.

Archer believes that manufacturability, repeatability and scalability will be critical requirements for future commercial quantum technologies, and the Company is increasingly aligning development activities around these objectives. This approach reflects Archer's view that future value creation will depend not only on demonstrating qubit functionality but also on establishing a pathway toward scalable semiconductor manufacturing.

Quantum Machine Learning

Archer has successfully completed the initial simulation and benchmarking phase of its CSIRO-supported Quantum Machine Learning (QML) fraud detection project, achieving a significant technical milestone (ASX ann. 4 Jun 2026). The team developed and tested a quantum neural network (QNN) using a public financial fraud dataset which yielded some promising first results (see ann xxx). The model was also successfully executed on IQM Garnet, a commercial 20-qubit quantum computer accessed through AWS Braket, validating operation on real quantum hardware.

Quantum-adjacent opportunities

Through its strategic review and ecosystem activities, Archer is evaluating a range of quantum-adjacent opportunities that leverage its expertise in graphene, semiconductors and advanced materials.

One area under assessment is graphene-based optical modulator technology, which may have potential applications across AI infrastructure, data centre communications and, most importantly, future quantum computing systems. Current activities are focused on technical feasibility and market assessment.

The Company believes these opportunities may complement its core quantum technology programs while expanding potential pathways to commercialisation.

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Biochip and semiconductor-enabled diagnostics

Archer continues to advance its Biochip program following the previously announced beta prototype milestone (ASX ann. 15 May 2026). Simultaneously to internal work Archer is progressing engagement activities with several Contract Development and Manufacturing Organisations (CDMOs).

Engagement with CDMOs is a critical step in the pathway toward clinical trials and eventual regulatory approval. CDMOs provide specialised capabilities in design for manufacture, process validation, quality management, and production under regulated conditions, helping to ensure that prototypes can be successfully translated into clinically deployable products. Establishing these partnerships early reduces development risk, supports future manufacturing readiness, and helps position the technology for clinical evaluation and regulatory submissions.

The Company is also pursuing commercial engagement opportunities associated with the program. Archer believes the Biochip platform demonstrates its ability to combine advanced materials, semiconductor devices and system-level engineering into technologies capable of progressing toward commercial deployment.

Strategic acquisition and IP opportunities

Archer is actively assessing opportunities to broaden its technology portfolio through strategic intellectual property, technology and acquisition opportunities that align with its semiconductor and quantum strategy.

Archer has commenced a strategic review of potential acquisitions and external intellectual property opportunities that are consistent with the Company's quantum technology strategy. The Company is assessing products, technologies, patents, know-how and commercial platforms that could:

- accelerate Archer's quantum technology roadmap
- broaden Archer's product and IP portfolio
- strengthen Archer's position in quantum computing, sensing, and semiconductor-enabled diagnostics
- provide nearer-term commercial pathways
- expand access to customers, partners, technical teams or manufacturing capability
- enhance long-term shareholder value

Archer is currently in discussions with several technology companies and institutions regarding potential product, IP, collaboration and acquisition opportunities.

These discussions remain incomplete and non-binding. There is no certainty that any transaction, acquisition, licence, collaboration or commercial arrangement will proceed. Archer will update the market in accordance with its continuous disclosure obligations if and when a binding agreement or other material development occurs.

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Commenting on the quantum project development progress, Dr. Simon Ruffell, CEO of Archer, said:

“Quantum technology is moving rapidly from a research theme into a strategic global industry. Governments, semiconductor companies and major technology groups are now investing heavily in quantum because of its potential importance to AI, computing, sensing, national security, healthcare and advanced manufacturing.

"Archer has been building its quantum technology capability for many years. We are now seeing that strategy come together across qubit development, quantum sensing, quantum machine learning and semiconductor-enabled medical diagnostics.

"We are also actively assessing opportunities to acquire complementary products, IP and technology platforms that can accelerate our strategy. We are in advanced discussions with several companies and will only proceed where we believe an opportunity is strategically aligned and capable of creating long-term value for Archer shareholders."

The Board of Archer authorised this announcement to be given to ASX.

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About Archer

Archer is a quantum technology company that operates within the semiconductor industry. The Company is developing advanced semiconductor devices, including chips relevant to quantum computing, sensing, and medical diagnostics. Archer utilises its global partnerships to develop these technologies for potential deployment and use across multiple industries. www.archerx.com.au