

ASX Announcement ([ASX: AXE](#))

10 November 2025

Archer and CSIRO to develop Quantum Machine Learning for fraud detection

Highlights

- Archer Materials has signed an agreement with CSIRO, Australia's National Science Agency to advance Quantum Machine Learning (QML) for fraud detection in finance transactions.
 - The project will build upon CSIRO's expertise in the field of QML to develop new and innovative QML models.
 - QML has the potential to offer enhanced reliability, training speed-up and unique feature extraction capabilities.
 - QML applications extend beyond finance, including healthcare, energy grid optimisation, manufacturing, autonomous vehicles, defence and aerospace, cybersecurity and artificial intelligence (AI).
 - This collaboration reinforces Archer's strategy to commercialise near-term quantum applications with global impact.
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Archer Materials Limited ("Archer", the "Company", "ASX: AXE"), a technology company developing advanced semiconductors for quantum technology and medical diagnostics, has entered into a Research Services Agreement with the data and digital specialist arm of Australia's national science agency, CSIRO, to develop a QML system designed to detect fraud in financial transactions.

The project will run from November 2025 to November 2026. It will focus on developing QML models to enhance the detection of fraudulent activities in financial transactions, with initial outcomes including prototype quantum models and performance benchmarks across simulated financial datasets.

Fraudulent financial activity remains a major global challenge, costing organisations billions of dollars each year. Fraud detection requires rapid and accurate identification of anomalies such as forged signatures, unauthorised transactions, and identity manipulation. Traditional systems are often reactive, complex to maintain, and limited in their ability to detect sophisticated patterns.

The collaborative project between Archer and CSIRO aims to develop new and innovative QML models which may be capable of detecting fraud in financial transactions. Once QML models are trained, the fraud detection framework will rapidly identify and flag any anomalies which arise from fraudulent activities.

Hybrid quantum-classical machine learning models that adapt classical neural network architectures for quantum computing can enable applications beyond fraud detection. It is conceivable that the technology can be adapted for other applications.

Commenting on the collaboration project, Simon Ruffel, CEO of Archer, said

"This partnership with CSIRO represents a significant step in growing Archer's quantum IP portfolio. Fraud detection is a critical challenge globally, and quantum machine learning offers a transformative way to address it."

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

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Archer is a next-generation quantum technology company building advanced semiconductor devices for quantum computing, quantum sensing, and medical diagnostics. Its carbon-based platform is designed to integrate with existing semiconductor manufacturing processes, allowing Archer to build a scalable pathway to commercial quantum applications in global markets.