Pasqal Leads European Defence Fund Project to Advance Fault-Tolerant Quantum Computing with Neutral Atoms

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Coordinated by Pasqal with ParityQC and Thales Nederland, the CoPaNA project combines parity-based error correction with neutral-atom hardware to advance scalable quantum computing for European security and defense

PARIS and INNSBRUCK, Austria, Nov. 24, 2026 (GLOBE NEWSWIRE) -- Pasqal (Nasdaq: PSQL), a global leader in neutral-atom quantum computing, today announced the public launch of CoPaNA (Concatenated Parity codes on Neutral Atoms), a three-year research project selected under the European Defence Fund (EDF) 2025 call and coordinated by Pasqal. Together with ParityQC (Austria) and Thales Nederland (Netherlands), Pasqal will work to advance the development of scalable, fault-tolerant quantum computing (FTQC).

Fault tolerance is the next frontier of quantum computing. To tackle the most demanding problems, quantum computers must detect and correct their own errors at scale. CoPaNA brings together advances in quantum error correction and neutral-atom hardware to address this challenge, while exploring future applications in defense relevant simulations and cybersecurity. The project aims to develop a blueprint for scalable FTQC, combining research into quantum error correction, hardware-software integration and the technical requirements of potential defense applications.

The project is aligned with the 2025 EU Quantum Strategy and Europe's ambition to secure sovereign access to next-generation computing capabilities. It also contributes to the European Defence Technological and Industrial Base by developing dual-use quantum technologies with European partners.

The consortium builds on the complementary strengths of its three members. ParityQC brings its expertise in quantum error-correcting codes and architectures, Pasqal leads the hardware and experimental work on its neutral-atom quantum processing unit (QPU), and Thales Nederland identifies the defense applications where these capabilities could make a difference and estimates the resources needed to run them on a fault-tolerant machine.

Pasqal has already outlined its public roadmap toward fault-tolerant quantum computing, targeting early FTQC capabilities in 2029. CoPaNA complements this roadmap by exploring how future FTQC systems could support applications in defense and cybersecurity. The project also reflects Pasqal’s commitment to advancing dual-use quantum technologies through European industrial and research collaboration.

The project is presented today at “Quantum Computing as a Strategic Technology in Defence and Security,” a public event in Innsbruck bringing together governments, EU institutions and industry to discuss the industrial and policy levers necessary to unlock the full potential of quantum computing for Europe’s defense and security. On November 26, Pasqal will also deliver a keynote on CoPaNA and quantum computing dual-use applications at the European Defence Agency (EDA) technical workshop “Quantum Technologies for Defence” in Athens, gathering experts from industry, national ministries and academia.

“Fault-tolerant quantum computing will redraw global technological and strategic maps, just as AI is doing today,” said Wasiq Bokhari, CEO of Pasqal. “CoPaNA brings together European leaders’ expertise in hardware, quantum error correction and defense systems to address some of the key technological challenges on the path to scalable quantum computing. By coordinating this initiative, Pasqal is helping build the sovereign quantum capabilities Europe needs to strengthen its defense and security, while advancing technologies with applications far beyond the defense sector.”

“Building a scalable quantum computer is, first and foremost, an architecture challenge. Fault tolerance does not come from hardware alone but from the way the entire system is designed,” said Wolfgang Lechner, Co-CEO of ParityQC. “Within CoPaNA, ParityQC contributes the architecture and quantum error correction these machines need to become reliable at scale,” added Magdalena Hauser Co-CEO of ParityQC.

“To function in a rapidly evolving threat landscape, future defense systems will need to process an unprecedented flow of data in real time. Quantum computing has the potential to provide the processing power we will require to maintain situational awareness, enabling operators to continue making fast, well-informed decisions. Through CoPaNA, we are exploring how this technology can contribute to Europe's future defense capabilities.” said Koen ten Hove, Chief Technical Officer of Thales Nederland.

About ParityQC
ParityQC, The Quantum Architecture Company, develops blueprints and enabling software for highly scalable quantum computers, based on the ParityQC Architecture, a fundamentally new paradigm for fully programmable quantum chips. ParityQC collaborates with hardware partners worldwide, from optimization on NISQ devices to general-purpose, error-corrected quantum computing.

For more information, visit parityqc.com or follow ParityQC on LinkedIn.

About Thales
Thales (Euronext Paris: HO) is a global leader in advanced technologies for the Defence, Aerospace, and Cyber & Digital sectors. Its portfolio of innovative products and services helps address several major challenges: sovereignty, security, sustainability and inclusion.

The Group allocates €4.5 billion per year in Research & Development in key areas, particularly for critical environments, such as Artificial Intelligence, Cybersecurity, Quantum and Cloud technologies.

Thales has more than 85,000 employees in 65 countries. In 2025, the Group generated sales of €22.1 billion.

About Pasqal
Pasqal (Nasdaq: PSQL) helps organizations tackle problems that are difficult or impossible to solve with conventional computing methods alone. Founded in 2019, with Nobel Prize–winner Alain Aspect as a co-founder, Pasqal builds and operates neutral-atom based quantum computers, delivered with a full software stack, for industry, science, and governments. Pasqal's production-ready systems are available both on-premises and through the cloud, enabling organizations to harness quantum computing without requiring in-house quantum expertise. A single hardware platform supports advanced analog quantum computing based workloads today and is designed to evolve toward fault-tolerant quantum computing in the future.

Headquartered in France with operations globally, Pasqal's quantum computing systems are used by customers across energy, financial services and advanced materials to address complex challenges. Pasqal's customers include Saudi Aramco, Crédit Agricole CIB, LG Electronics and supported by partnerships with NVIDIA (Pasqal is contributing to the NVQLink initiative) and IBM (Pasqal is part of the IBM Quantum Network).

Forward-Looking Statements
Certain statements herein may be considered "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements generally are accompanied by words such as "believe," "may," "might", "will," "estimate," "continue," "anticipate," "intend," "expect," "should," "would," "could," "plan," "predict," "project", "forecast," "potential," "seem," "seek," "target," "possible," "future," "outlook" or similar terminology or expressions that predict or indicate future events or trends. These forward-looking statements include, but are not limited to, statements regarding future events, including Pasqal's expected use of cash available at closing of the business combination and Pasqal's ability to accelerate global deployment of its quantum computing platform.

These statements are based on current expectations and are not predictions of actual performance. They are provided for illustrative purposes only and must not be relied on as a guarantee, prediction or definitive statement of fact or probability. Actual events and circumstances are difficult or impossible to predict and are beyond the control of Pasqal. These statements are subject to known and unknown risks and uncertainties and assumptions regarding Pasqal's business and the business combination, and actual results may differ materially. These risks and uncertainties include, but are not limited to: general economic, political, social and business conditions; uncertainty or changes with respect to laws and regulations; risks related to Pasqal's indebtedness; the risk from Pasqal pursuing an emerging technology, facing significant technical challenges and the potential that it may not achieve commercialization or market acceptance; Pasqal's reliance on strategic partners and other third parties; Pasqal's ability to maintain, protect and defend its intellectual property rights; and other risks that will be detailed from time to time in filings with the U.S. Securities and Exchange Commission. The foregoing list of risk factors is not exhaustive. There may be additional risks that Pasqal does not know or currently believes are immaterial that could also cause actual results to differ from those contained in forward-looking statements. In addition, forward-looking statements provide Pasqal's expectations, plans and forecasts of future events and views as of the date of this communication. While Pasqal may elect to update these forward-looking statements in the future, Pasqal specifically disclaims any obligation to do so.

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