

Alice & Bob Selected by DARPA for the Quantum Benchmarking Initiative

Company's cat qubit technology awarded funding for DARPA QBI Stage A to accelerate the path to utility-scale quantum computing by 2033

BOSTON, MA, UNITED STATES, April 3, 2025 /EINPresswire.com/ -- [Alice & Bob](#), a leader in fault-tolerant quantum computing, today announces its selection as a performer in the U.S. Defense Advanced Research Projects Agency's (DARPA) Quantum Benchmarking Initiative (QBI). Under this program, Alice & Bob will contribute to QBI's mission of verifying and validating whether fault-tolerant quantum computers can achieve utility-scale operation—where computational value exceeds costs—by 2033.



Under the agreement, Alice & Bob can advance through three critical stages, with each phase contingent on the successful completion of the previous one. In Stage A, the company will detail the concept of a utility-scale quantum computer based on cat qubits, already a goal of the French startup's [ambitious roadmap to 2030](#) published last December. If selected for Stage B, Alice & Bob will develop a detailed R&D plan for building such machine, identifying key risks, necessary prototypes, and the steps required to advance fault tolerance. Finally, Stage C will involve close collaboration with DARPA's test and evaluation team to rigorously verify and validate that Alice & Bob's quantum computing approach can be constructed and operated as intended at scale.

The Department of Energy's (DOE) Office of Science plays a key role in QBI providing critical tools, infrastructure and expertise to rigorously evaluate, co-design and determine useful quantum computers' feasibility for real-world applications.

Alice & Bob will leverage its proprietary cat qubit technology to build scalable and useful fault-tolerant quantum computers. The company's approach, which inherently suppresses bit-flip errors, dramatically reduces the hardware needed for quantum error correction, one of the primary challenges in quantum computing. Given their fundamental characteristics that promote error correction at scale, cat qubits are conceived to reach large scale quantum computing more efficiently at a fraction of the footprint and cost of alternative approaches.

"Alice & Bob has always been solely focused on building a universal, fault-tolerant quantum computer," said Théau Peronnin, CEO and Co-founder of Alice & Bob. "The DARPA QBI contract is a major validation of our approach, allowing us to work on the real-world impact of quantum computers in high-technology domains, including chemistry and materials science."

DARPA's interest in utility-scale quantum computing reflects the growing recognition of its strategic importance in advancing computing, and scientific discovery. By participating in QBI, Alice & Bob strengthens its position at the forefront of global quantum innovation.

The company has recently obtained a [\\$100 million Series B funding round](#) and has been selected for PROQCIMA the multi-million quantum computing procurement program by the French government.

"Alice & Bob's selection for the QBI program underscores the transformative potential of our cat qubits," said Raphaël Lescanne, CTO and Co-founder of Alice & Bob. "With DARPA's and the QBI team's support, we will keep innovating quantum error correction and sustain our momentum towards practical quantum computing."

About Alice & Bob

Alice & Bob is a quantum computing company based in Paris and Boston whose goal is to create the first universal, fault-tolerant quantum computer. Founded in 2020, Alice & Bob has already raised \$130 million in funding, hired over 120 employees and demonstrated experimental results surpassing those of technology giants such as Google or IBM. Alice & Bob specializes in cat qubits, a pioneering technology developed by the company's founders and later adopted by Amazon. Demonstrating the power of its cat architecture, Alice & Bob recently showed that it could reduce the hardware requirements for building a useful large-scale quantum computer by up to 200 times compared with competing approaches. Alice & Bob cat qubit is available for anyone to test through cloud access. Follow Alice & Bob on LinkedIn, X or YouTube, visit their website www.alice-bob.com, or join The Cat Tree on Slack to learn more.

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