Haiqu Launches Agentic Quantum Operating System for Enterprise Applications R&D

Full-stack platform combines agentic AI with proprietary middleware that helps build and solve complex problems faster with fewer computational resources

NEW YORK CITY, NY, UNITED STATES, May 6, 2026 /EINPresswire.com/ -- Haiqu, a leading developer of quantum middleware, today announced the launch of its Agentic Quantum Operating System (OS), the first full-stack quantum intelligence platform for enterprise and scientific quantum R&D.

Currently, quantum development is impeded by the time and costs it takes to design the right application, execute the experiment, and iterate on the results.

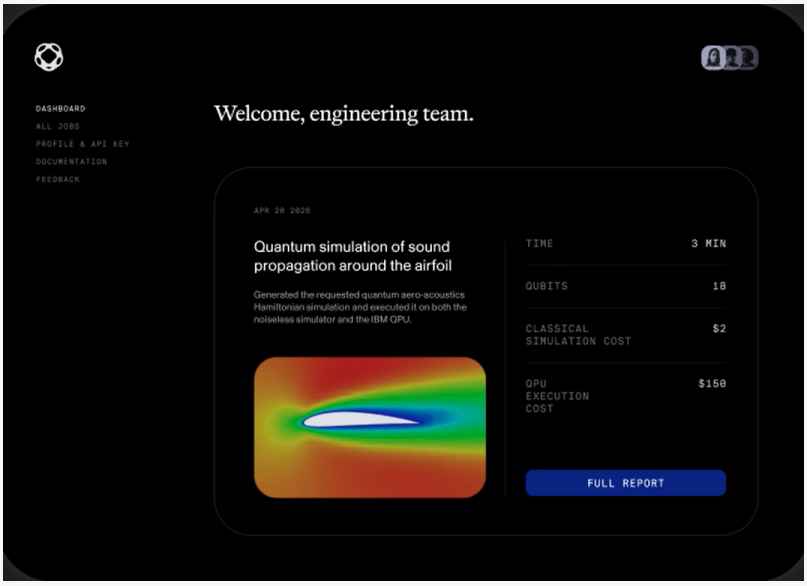
Haiqu's Agentic Quantum OS is designed to bring new performance standards to quantum R&D teams. It combines quantum research agents with Haiqu's proprietary software stack to help teams identify the right problem, design executable quantum experiments, and run them efficiently on real quantum hardware.

Coupled with additional performance and execution layers, the platform is designed to help enterprise R&D teams get usable results faster, spend less money per experiment, train new researchers more easily, and turn early ideas into testable prototypes faster.

"The bottleneck for quantum R&D teams is often not access to a QPU. It is the time and expertise required to identify the right problem, structure the work and get credible application prototypes," said Richard Givhan, CEO and Co-founder of Haiqu. "With our first Agentic Operating System, we are giving R&D teams effective tools to achieve commercial applications as

systems become more powerful."

Haiqu's end-to-end platform equips quantum engineers to guide application development using natural language through business questions or exploratory research ideas to produce an execution-ready quantum application plan using three key pillars:



Dashboard on Haiqu's Agentic Quantum Operating System

- Agentic Intelligence — built on Haiqu's proprietary quantum algorithm research, domain-specific workflows, and a curated quantum theory knowledge base, that automates application design and guides users to optimal approaches.

- Haiqu SDK — developer tools built using agents with users in mind that can be easily deployed in agentic development workflows to maximize performance through data loading, algorithmic optimization and error mitigations, enabling users to extract more value from every quantum operation.

> Observing research into tools like Haiqu's middleware allows for a deeper understanding of how [quantum] bottlenecks might eventually be addressed."
> *Dr. Kristin Milchanowski, Chief AI & Quantum Officer at BMO*

- Haiqu Runtime — an orchestration engine that streamlines how applications execute with an optimal infrastructure layer, reducing cost and time required to iterate on quantum applications.

In recent tests completed by the company on a quantum system, a molecular dynamics simulation that previously required $30,000 and more than nine hours to run was reproduced for about $25 in roughly 30 seconds by optimizing execution on the Haiqu platform. Similar results or better were found for optimization algorithms, quantum machine learning models, and probability distributions.

HaiquOS also demonstrated that agentic quantum workflows can translate advanced scientific problems into executable experiments. The system prepared simulations of the single-impurity Anderson model, a foundational model for strongly correlated electron systems, from scratch and built a Haiqu OS/SDK pipeline for simulating neutron-scattering experiments on one-dimensional quantum magnets. The pipeline reproduced experimentally observed signatures of magnetic materials, showing that today's quantum computers, when paired with the right

software stack, can already support meaningful scientific simulations. Learn more about these results here.

A number of enterprises already received early access to the OS, including Capgemini and Deloitte.

Dr. Kristin Milchanowski, Chief AI & Quantum Officer at BMO and Founding Director of the BMO Institute for Applied Artificial Intelligence & Quantum, said research into emerging quantum software platforms can help inform how the industry addresses foundational scalability challenges.

“As quantum hardware continues to evolve, foundational challenges such as data loading and efficient utilization of limited qubits remain critical hurdles,” said Milchanowski. “Observing research into tools like Haiqu’s middleware allows for a deeper understanding of how these bottlenecks might eventually be addressed. These early-stage, research-driven insights are vital for informing the long-term direction of the quantum landscape and understanding the future scalability of the technology.”

For a more in-depth look at HaiquOS, please visit Haiqu’s website.

About Haiqu
Haiqu is an emerging leader in quantum software that supports the notion that near-term, commercially viable quantum applications are achievable with the right software, even on current hardware. Haiqu’s hardware-agnostic software can run applications with up to 100x more operations on current devices compared to competitors. Headquartered in New York City in the United States, Haiqu’s expert team operates from US, Canada, Ukraine, UK, EU, and Singapore, contributing to the company’s mission to make quantum computing practical as soon as possible.

Taylor White
HKA, Inc. Marketing Communications
+1 714-426-0444
email us here
