



Rigetti and Oxford Instruments Announce Successful Completion of Innovate UK Project to Launch One of the First UK-Based Quantum Computers

April 16, 2024

LONDON and OXFORD, United Kingdom, April 16, 2024 (GLOBE NEWSWIRE) -- Rigetti UK Limited, a wholly owned subsidiary of Rigetti Computing, Inc. (Nasdaq: RGTI) ("Rigetti" or the "Company"), a pioneer in full-stack quantum-classical computing, and Oxford Instruments NanoScience, a leading provider of cryogenic systems, announce that their three-year project to build and operate one of the first quantum computers in the UK has been successfully completed. The consortium also included the Quantum Software Lab at the University of Edinburgh, Phasecraft, and Standard Chartered Bank. The goals of the Rigetti-led £10 million consortium were to accelerate the commercialization of quantum computing in the UK (1) through the delivery of a quantum computer in the UK, (2) by advancing practical applications in machine learning, materials simulation, and finance, and (3) furthering the development of the UK's quantum computing talent, infrastructure, and national supply chain. The consortium was backed by funding from the UK government's Quantum Technologies Challenge, led by UK Research & Innovation (UKRI).

The 32-qubit Aspen™-class quantum computer was Rigetti's first system deployed in the UK and was made available over the cloud to the Company's UK partners via Rigetti's Quantum Cloud Services (QCS™) cloud computing platform to pursue quantum application and algorithm development. The Quantum Software Lab worked to develop new ways of testing quantum hardware and verifying the performance of quantum programs, and worked with Standard Chartered Bank to advance quantum machine learning applications for finance. Phasecraft used its deep knowledge of quantum algorithms and high-efficiency quantum software to harness the system for near-term applications in materials design and simulation.

The system was hosted at Oxford Instruments' Tubney Woods facility using Oxford Instruments' ProteoxLX dilution refrigerator, and was supported by Oxford Instruments' state-of-the-art infrastructure and expert cryogenics support. Smooth and seamless infrastructure was essential so that the consortium partners could run algorithms without interruption via QCS. Backup power and resilient cooling systems in highly controlled temperature and humidity environments guaranteed high uptime of the quantum system.

Further developing its UK quantum computing capabilities, Rigetti recently announced that it won a UKRI Competition to deliver a 24-qubit quantum computing system to the National Quantum Computing Centre (NQCC) based on the Company's latest Ankaa™-class chip architecture.

Dr. Subodh Kulkarni, Rigetti CEO, said, "Completing this project, with the end result being a useful 32-qubit quantum computer, is an exceptional achievement for all of the project partners. It takes a world-class team to build and deploy a quantum computer. The UK has become a world leader in quantum computing technologies, and we are excited to continue to contribute to its quantum computing capabilities. Additionally, Rigetti plans to leverage this experience to continue to develop our UK quantum computing leadership as we embark on deploying a 24-qubit Ankaa-class quantum computer at the NQCC's Harwell campus."

Matt Martin, Managing Director at Oxford Instruments NanoScience, said, "It has been an honor to collaborate with our longstanding partner Rigetti on this project, which brought the company's first UK-based quantum computer. The project was planned from the beginning to align with national strategic initiatives and is a fantastic step towards the commercial adoption of quantum computing in the UK. Our team learned a huge amount from this project, rising to every challenge. We have comfortably demonstrated both the reliability of the ProteoxLX and the proficiency of our service team."

In addition to showcasing Rigetti's ability to successfully deploy a quantum computer in the UK, the research conducted during this project also resulted in subsequent quantum application development work. In January 2024, Rigetti announced that it was awarded an Innovate UK grant as part of the Feasibility Studies in Quantum Computing Applications competition with Standard Chartered, Imperial College London, and Amazon Web Services (AWS).

Elena Strbac, Managing Director, Global Head of Data Science and Innovation at Standard Chartered Bank said, "Establishing ourselves as a quantum-ready financial institution is becoming more important as quantum computers scale, and our problems become more complex. An important result of this work is addressing the feasibility of quantum machine learning methods to more effectively process, interpret, and make decisions with complex data streams, which we will continue to study in our new Innovate UK consortium."

Ashley Montanaro, Phasecraft co-founder, said, "Quantum research and algorithm development is nothing without the ability to test it in real-life situations. Hands-on access to Rigetti's quantum hardware throughout this project enabled us to advance our quantum simulation algorithm and software development for near-term applications, which will support us in furthering our research in areas such as new material discovery. We also gained valuable insight into real-world use cases that will help with the adoption of practical quantum computing across many industries, including clean energy technologies such as batteries and solar."

Professor Elham Kashefi, Director of the Quantum Software Lab and Professor of Quantum Computing at the University of Edinburgh, said, "This consortium enabled our research team to not only pursue important quantum algorithm work to further benchmark quantum devices using real quantum hardware, but to also grow our group and rebrand as the Quantum Software Lab (QSL) at the University of Edinburgh. We are already applying the techniques and protocols developed during this project towards advancing our understanding of the requirements of practical quantum computers."

Rigetti's 32-qubit Aspen™-class quantum computer



The 32-qubit Aspen™-class quantum computer was Rigetti's first system deployed in the UK. Rigetti was joined by Oxford Instruments, University of Edinburgh, Phasecraft, and Standard Chartered Bank in this UKRI-funded project. Photo by Benedict Redgrove.

Roger McKinlay, Challenge Director, Quantum Technologies, in Innovate UK said: "This project was launched with a vision of the UK being the go-to place for those striving to turn quantum research into quantum business. My thanks to this outstanding team of 'quantrepreneurs' – led by Rigetti UK Limited – who have made the vision a reality."

About Rigetti

Rigetti is a pioneer in full-stack quantum computing. The Company has operated quantum computers over the cloud since 2017 and serves global enterprise, government, and research clients through its Rigetti Quantum Cloud Services platform. The Company's proprietary quantum-classical infrastructure provides high performance integration with public and private clouds for practical quantum computing. Rigetti has developed the industry's first multi-chip quantum processor for scalable quantum computing systems. The Company designs and manufactures its chips in-house at Fab-1, the industry's first dedicated and integrated quantum device manufacturing facility. Learn more at www.rigetti.com.

About Oxford Instruments NanoScience

Oxford Instruments NanoScience designs, supplies and supports market-leading research tools that enable quantum technologies, new materials and device development in the physical sciences. Our tools support research down to the atomic scale through creation of high performance, cryogen-free low temperature and magnetic environments, based upon our core technologies in low and ultra-low temperatures, high magnetic fields and system integration, with ever-increasing levels of experimental and measurement readiness. Oxford Instruments NanoScience is a part of the Oxford Instruments plc group.

Standard Chartered

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About Phasecraft

Phasecraft is a quantum algorithms company, whose mission is to accelerate the practical application of quantum computing by redesigning quantum algorithms for the imperfect quantum computers of today. Phasecraft was founded in 2019 by Toby Cubitt, Ashley Montanaro and John Morton, world-leading quantum scientists who have spent decades leading top research teams at UCL and University of Bristol. Phasecraft works in partnership with leading quantum hardware companies, including Google, IBM and Rigetti, academic and industry leaders, to develop high-efficiency algorithms to move quantum computing from experimental demonstrations to useful applications. Learn more: www.phasecraft.io

About Quantum Software Lab, School of Informatics, University of Edinburgh

The Quantum Software Lab (QSL) is a collaboration between NQCC and the University of Edinburgh, hosted in the School of Informatics. QSL is a world-leading research lab with 40+ scientists developing software for quantum computers. QSL works with end-users to investigate practical ways of using quantum computers to solve incredibly difficult problems. Many of which cannot be solved on today's classical computers. The objective of QSL is to create useful applications of quantum computers that benefit our economy and society. QSL is part of multiple UK and EU-wide quantum networks. QSL has strong research expertise in algorithms, programming languages, semantics, security, and verification. QSL hosts the recently announced EPSRC Centre for Doctoral Training in Quantum Informatics to train 75+ new PhD students in collaboration with University of Oxford, University College London, University of Strathclyde, and Heriot Watt University.

The University of Edinburgh is consistently ranked among the best 30 universities in the world – it's ranked 22nd in the most recent QS World University rankings. The School of Informatics is one of the largest of its kind and is 1st in the UK for research breadth and quality based on Times Higher Education Computer Science and Informatics power ranking based on REF 2021 results.

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Cautionary Language Concerning Forward Looking Statements

Certain statements in this communication may be considered "forward-looking statements" within the meaning of the federal securities laws, including but not limited to, expectations with respect to the Company's business and operations, including its expectations with respect to commercial adoption of quantum computing in the UK, and any future systems deployed by Rigetti in the UK, expectations related to the Innovate UK SBRI award to deliver a 24-qubit quantum computer to the NQCC, expectations related to the Innovate UK grant to work with AWS, Imperial College London and Standard Chartered, expectations related to the continued feasibility of quantum machine learning methods to more effectively process, interpret, and make decisions with complex data streams, expectations related to advancing our understanding of the requirements of practical quantum computers and expectations related to the future business prospects for quantum computing in the UK. Forward-looking statements generally relate to future events and can be identified by terminology such as "commit," "may," "should," "could," "might," "plan," "possible," "intend," "strive," "expect," "intend," "will," "estimate," "believe," "predict," "potential," "pursue," "aim," "goal," "outlook," "anticipate," "assume," or "continue," or the negatives of these terms or variations of them or similar terminology. Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward-looking statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable by Rigetti and its management, are inherently uncertain. Factors that may cause actual results to differ materially from current expectations include, but are not limited to: Rigetti's ability to achieve milestones, technological advancements, including with respect to its roadmap, help unlock quantum computing, and develop practical applications; the ability of Rigetti to complete ongoing negotiations with government contractors successfully and in a timely manner; the potential of quantum computing; the ability of Rigetti to obtain government contracts and the availability of government funding; the ability of Rigetti to expand its QCS business; the success of Rigetti's partnerships and collaborations; Rigetti's ability to accelerate its development of multiple generations of quantum processors; the outcome of any legal proceedings that may be instituted against Rigetti or others; the ability to continue to meet stock exchange listing standards; costs related to operating as a public company; changes in applicable laws or regulations; the possibility that Rigetti may be adversely affected by other economic, business, or competitive factors; Rigetti's estimates of expenses and profitability; the evolution of the markets in which Rigetti competes; the ability of Rigetti to execute on its technology roadmap; the ability of Rigetti to implement its strategic initiatives, expansion plans and continue to innovate its existing services; disruptions in banking systems, increased costs, international trade relations, political turmoil, natural catastrophes, warfare (such as the ongoing military conflict between Russia and Ukraine and related sanctions and the state of war between Israel and Hamas and related threat of a

larger regional conflict), and terrorist attacks; and other risks and uncertainties set forth in the section entitled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements" in the Company's Annual Report on Form 10-K for the year ended December 31, 2023 and other documents filed by the Company from time to time with the SEC. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and the Company assumes no obligation and does not intend to update or revise these forward-looking statements other than as required by applicable law. The Company does not give any assurance that it will achieve its expectations.

A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/8a77fb8-9e86-4750-a8cf-e59b24cfd38c>