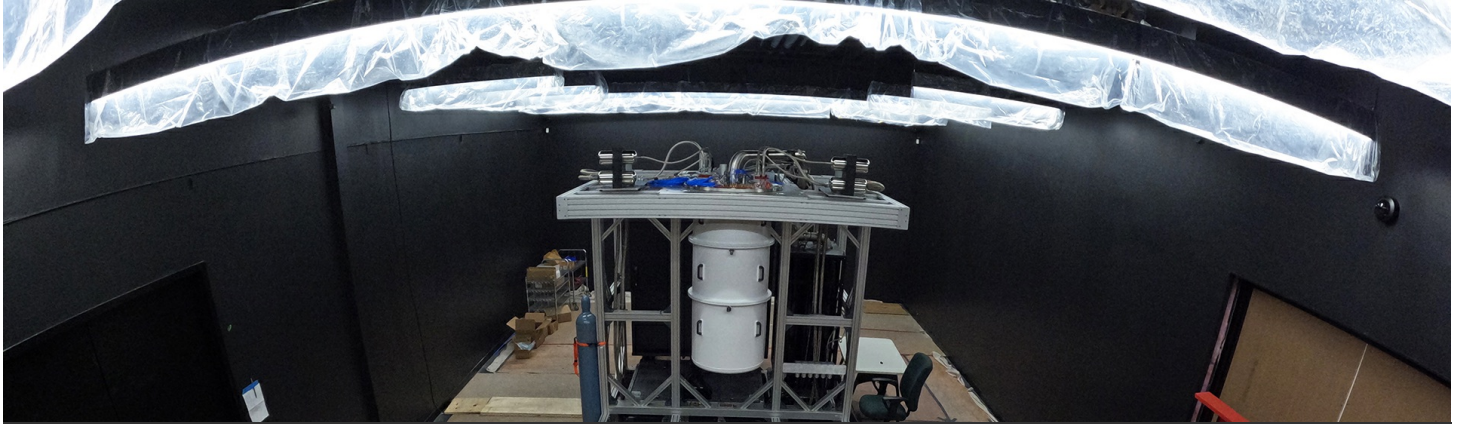


IBM and PINQ² to Accelerate Quantum Computing in Quebec

PINQ² will be sole operator of Canada's first IBM Quantum System One, powered by utility-scale quantum processor

PINQ² researchers and clients to explore solutions to sustainability challenges in Quebec, Canada, and globally, as well as accelerated computing in financial services



IBM Quantum System One, powered by utility-scale quantum processor, being installed at IBM Bromont for PINQ². (Credit: IBM)

July 10, 2023 – IBM (NYSE: [IBM](#)) and the Platform for Digital and Quantum Innovation of Quebec (PINQ²) have broken ground to install Canada's first IBM Quantum System One, having partnered to accelerate quantum computing research in Quebec. The 127-qubit, utility-scale system is anticipated for completion before the end of this year and can be used to help accelerate advanced quantum research into application development to tackle complex and pressing global challenges.

PINQ² will be the exclusive operator of the quantum computer, with the collaboration furthering PINQ²'s goal to strengthen Quebec's position as a leader in quantum technologies. With the partnership, PINQ² aims to build and enhance Quebec's world-renowned innovation ecosystem, foster talent development, drive industry advancement, facilitate scientific research, and support small and medium-sized enterprises (SMEs) on their quantum computing journey. Leveraging the ecosystem of DistriQ, the quantum innovation zone of Québec, PINQ² consolidates its position as a quantum laboratory, strengthening its capabilities to drive groundbreaking research and computing in financial services and sustainable development.

PINQ² is a non-profit organization founded in 2020 by the Ministère de l'Économie, de l'Innovation et de l'Énergie du Québec (MEIE) and the Université de Sherbrooke. Aiming to provide access to quantum computing as an IBM Quantum Computational Center, alongside its high-performance computing (HPC) service offering, PINQ² is working to establish itself as an integral part of Quebec's innovation strategy.

With the computing power of the IBM Quantum System One, PINQ² intends to explore complex global sustainability challenges, as well as opportunities in financial services. This collaboration builds upon the Quebec-IBM Discovery Accelerator partnership, announced in February 2022, which further established Quebec's interest in being a leader in the progress of quantum computing research.

"Quantum computing is the next technological revolution, and this partnership between IBM and PINQ² will position Quebec at the forefront of this transformative journey. This collaboration will not only foster groundbreaking research and scientific advancements but also empower businesses, fuel innovation, and address global challenges in areas such as financial services and sustainable development. With access to the IBM Quantum System One and our strong collaborations, PINQ² strengthens its role as a quantum laboratory on the global stage. We will drive innovation, enhance competitiveness, and create a brighter future for Quebec," said Éric Capelle, General Manager of PINQ².

As an IBM Quantum Computational Center, PINQ² will be able to offer academic institutions, companies, and organizations across Quebec, Canada, and globally access via the cloud to the IBM-managed system to conduct their own research.

About IBM Quantum System One

Quantum computing is a rapidly emerging technology that harnesses the laws of quantum mechanics to be applied toward solving certain problems that today's most powerful supercomputers cannot practically solve.

IBM Quantum System One is the first integrated quantum system with compact design optimized for stability, reliability and continuous use, have been deployed in multiple locations around the world, including Germany, Japan, the US, and soon Canada. Its utility-scale 127-qubit processor will offer improved coherence times as well as lower error rates over previous IBM quantum systems.

"More organizations around the world are beginning to explore how quantum could impact their industry and business. By deploying an IBM Quantum System One in Quebec, PINQ² will play an important role in offering access to quantum computing to an even broader ecosystem. Our team at IBM is excited to support PINQ² and their Quantum Computational Center members in their research on a 'utility-scale' system — a point at which quantum computers could serve as scientific tools to explore a new scale of problems," said Jay Gambetta, IBM Fellow and Vice President, IBM Quantum.

About PINQ²

PINQ² partners with companies to help them accelerate digital transformation, offering a high-performance computing (HPC) platform, artificial intelligence, advanced data analysis, simulation software, and now quantum computing. It has been set up with funding from the Government of Quebec and academic and industrial partners.

PINQ²'s main aim reflects the goals of the funders: to help develop better public-private collaboration in Quebec and across Canada between scientists, companies and organizations, and find better solutions to the world's most complex challenges, faster. The organization's vision is to become an accelerator of digital innovation for Quebec companies in the priority but non-exclusive fields of Environment, Energy, Finance and Health. Its added value is to offer a dedicated and secure hybrid-class quantum environment with a fluid and simple user experience. With this approach, PINQ² helps companies to assess how digital and quantum technologies could improve their existing processes.

One of PINQ²'s priorities is to find and attract talent to support companies, transfer know-how and prepare for future demand. PINQ² has surrounded itself with in-house scientific expertise in the fields of Artificial Intelligence and quantum cryptography to support and equip Quebec companies to train their own development force to absorb this new technological breakthrough. As a virtual innovation laboratory, access to PINQ² is supported by provincial and federal subsidy programs through three progressive and cumulative formulas: Discovery, Innovation, and Advantage, all supported by a team of dedicated experts.

About IBM

IBM is a leading global hybrid cloud and AI, and business services provider, helping clients in more than 175 countries capitalize on insights from their data, streamline business processes, reduce costs and gain the competitive edge in their industries.

Nearly 4,000 government and corporate entities in critical infrastructure areas such as financial services, telecommunications and healthcare rely on IBM's hybrid cloud platform and Red Hat OpenShift to affect their digital transformations quickly, efficiently and securely. IBM's breakthrough innovations in AI, quantum computing, industry-specific cloud solutions and business services deliver open and flexible options to our clients. All of this is backed by IBM's legendary commitment to trust, transparency, responsibility, inclusivity and service.

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