



Quantum
City



UNIVERSITY OF
CALGARY

**BUILDING
THE FUTURE
OF QUANTUM
INNOVATION**

ABOUT QUANTUM CITY

Quantum City is building an ecosystem for quantum science and technology in Alberta bringing together researchers, developers and adopters of quantum technology and services.

Quantum City is establishing quantum technology enabling infrastructure, creating a pipeline for talent and experts and narrowing the gap between quantum technology and solutions to support the development of a vibrant economic and scientific hub based in Calgary.

These combined assets will create a unique, and once-in-a-generation opportunity to position Alberta as a national and international jurisdiction in the new quantum economy.



Quantum City was established through a strategic partnership between the University of Calgary, the Government of Alberta and Mphasis.



THREE FOUNDATIONAL PILLARS

Quantum City's mission is to capture the benefit of quantum technology by creating adoption pathways and is achieved through three pillars.

Establishing
quantum technology
enabling
infrastructure

1

Creating a
pipeline for talent
and experts

2

Narrowing
the gap between
quantum technology
and solutions

3

Where quantum technology becomes quantum solutions

Vision

ESTABLISHING QUANTUM-ENABLING INFRASTRUCTURE

Quantum City
is bridging the gap
between quantum technology
and real-world solutions
implementation by developing
world-class infrastructure and
fostering top talent and expertise.
This initiative is positioning Calgary
and Alberta as a leading global
hub for quantum
innovation.



qHub

A 17,400 sq. ft. collaborative hub designed to bring together quantum researchers, quantum technology creators and users. Featuring startup acceleration programs, a solutions studio and a membership program, qHub fosters innovation, connection and growth.

qLab

State-of-the-art quantum-research facilities supporting the next generation of quantum technologies. Spanning over 8,500 sq. ft., qLab features over 4,000 sq. ft. of advanced Class 10,000, 1,000 and 100 cleanrooms as well as an additional 4,500 sq. ft. of support, laboratory and workshop spaces for driving precision fabrication of quantum devices, including photonic circuits, superconducting qubits and optomechanical sensors.

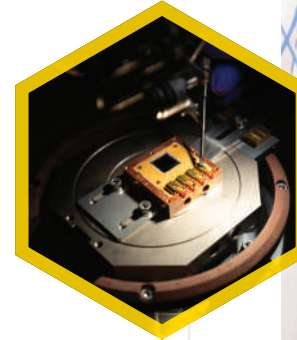


By anchoring these capabilities locally, Quantum City enables businesses to develop and scale quantum technologies without relying on external facilities—strengthening Alberta’s position in key sectors such as energy, healthcare and advanced manufacturing.

qLab and qHub’s Impact on Quantum Solution Development

Quantum City’s quantum-enabling infrastructure, including qLab and qHub, provides the essential tools, expertise and collaboration spaces needed to bridge quantum research with industry applications.

This infrastructure is key to Canada’s leadership in quantum commercialization, transforming research into deployable solutions. With a strong industrial base and Quantum City’s resources, Alberta becomes a global hub for quantum innovation, attracting companies, talent and investment.



“

Quantum City has the potential to impact every sector, from agriculture to life sciences, from energy to logistics.”

Dr. Ed McCauley

President, University of Calgary

QUANTUM CITY: BUILDING AN ECOSYSTEM FOR IMPACT

Quantum City connects quantum technology with real-world applications, aligning innovations with industry needs to drive disruptive advances in secure communication, sensing and computing. With a rapidly growing ecosystem of startups, corporate partners and training programs, Calgary is at the forefront of capturing the economic benefits of quantum innovation.





Through a variety of programs and initiatives, Quantum City brings together researchers, quantum technology creators, startups, industry leaders, government, end users and innovation ecosystem builders. By fostering collaboration across this diverse community, Quantum City drives the development and real-world application of quantum technologies.

qConnect Summit Series

qConnect, the annual summit series, is the leading quantum technology event for industry, bringing together business leaders, government and quantum experts to explore the potential and risks of quantum technologies across sectors. In 2023 and 2024, the summit attracted over 500 participants from industries such as energy, logistics and finance, fostering collaboration and real-world innovation.



Over 500
participants in
2023 and 2024 from
around the world



Scientist-in-Residence Program

The Scientist-in-Residence program provides tailored, expert guidance for organizations seeking to explore and adopt quantum technologies and solutions. Acting as honest advisers, these experts help bridge the gap between theoretical research and industry needs, offering invaluable insight to drive innovation.

With dedicated Scientists-in-Residence specializing in three key areas—quantum computing, quantum sensing and quantum-safe communications—the program addresses a broad spectrum of industry challenges.

It supports the quantum industry, including startups, by refining technologies, aligning developments with market needs and overcoming technical hurdles. These advisers connect startups with industry leaders and researchers, helping them develop practical use cases and integrate their solutions into real-world applications, driving innovation and adoption.



Three key focus areas:

1. Quantum computing
2. Quantum sensing
3. Quantum-safe communications



I was deeply inspired by the vibrant quantum community. The collaboration & passion for innovation was truly remarkable. Thanks to Quantum City for putting on such an enlightening and enriching event.”

Sharon O, *BMO*

International Collaborations

Quantum City continues to establish strategic partnerships with global quantum leaders, including QAI Ventures in Switzerland and Mphasis in India to create a robust international innovation network.

QAI Ventures Accelerator
(Powered By Quantum City)



Launched in 2024, the QAI Ventures Accelerator, powered by Quantum City, supports early-stage quantum technology startups. This collaboration leverages Quantum City's ecosystem-building expertise and QAI Ventures' acceleration resources to drive quantum solutions for global impact.

QAI Ventures, based in Basel, Switzerland, is a key player in advancing global quantum technology innovation. The partnership with Quantum City to establish the QAI Ventures Accelerator powered by Quantum City has played a significant role in fostering international collaboration within the quantum ecosystem. This collaboration brings together leading-edge expertise, resources, and networks from both Europe and Canada, allowing quantum startups to thrive. For Canada, the accelerator represents a major leap forward in building a world-class quantum ecosystem, attracting top-tier global talent and investment while reinforcing the country's position as a leader in quantum research and innovation.



Quantum City's
ecosystem-building expertise



QAI Ventures'
acceleration resources



Solutions Studio

Collaborating with industry partners, Quantum City's Solutions Studio accelerates the transformation of quantum technology into solutions.



USE CASE DEVELOPMENT INITIATIVE

This initiative is a collaborative program led by Quantum City in partnership with industry to identify and refine problem statements that can be effectively addressed using quantum technologies.

Through targeted workshops and strategic consultations, Quantum City works closely with company business units to thoroughly analyze challenges, define clear project objectives and ensure alignment with quantum solution capabilities.

QUANTUM CITY MEMBERSHIP PROGRAM

The Membership Program is a strategic offering designed to enhance corporate end-users' experimentation with quantum solutions, providing access to expertise, resources and real-world applications. This inclusive network connects industry leaders looking to explore, learn and adopt quantum solutions. Membership provides access to expert insights, peer collaboration and specialized resources, helping organizations navigate and integrate quantum technologies effectively.



QUANTUM CITY GLOBAL CHALLENGE SERIES

The global competition series tackles industry-specific challenges by developing innovative solutions through quantum technologies. It provides an opportunity to tap into a global pool of talent and experts to address these challenges. Additionally, it allows industry to engage in the full problem-solving process—from defining and refining problem statements to evaluating proposed solutions—guided by Quantum City's Scientist-in-Residence program.



CREATING A PIPELINE FOR TALENT & EXPERTS

Advancing Industry-Focused Quantum Innovation Through Research Support

The Consortia Awards program funds collaborative research and partnerships to advance quantum technology for industry applications aligned with the National Quantum Strategy. By supporting innovation and industry connections, the awards support the development of practical quantum solutions to address real-world challenges.



Quantum City is building a strong talent pipeline and network of experts to empower quantum innovators, startups and industry leaders in developing solutions for real-world challenges.



The University of Calgary is a global leader in quantum research, which is revolutionizing our understanding of nature's basic elements and is driving technology innovation.

Our growing reputation has now attracted one of the foremost venture capital firms in the world working in the quantum space. Through this partnership, we'll be able to speed up the process for startups with innovative ideas to develop their projects into marketable solutions for tomorrow's problems."

Dr. William Ghali

Vice-President (Research), University of Calgary

Fostering Quantum Talent for the Future

Professional Master of Quantum Computing & IQuCode CREATE

Quantum City supports the world's first professional Master of Quantum Computing at the University of Calgary, equipping students with expertise in quantum software, hardware and applications to drive industry adoption. Complementing this, the IQuCode CREATE program provides specialized training in quantum computing hardware and software, strengthening Canada's talent pipeline for quantum innovation.

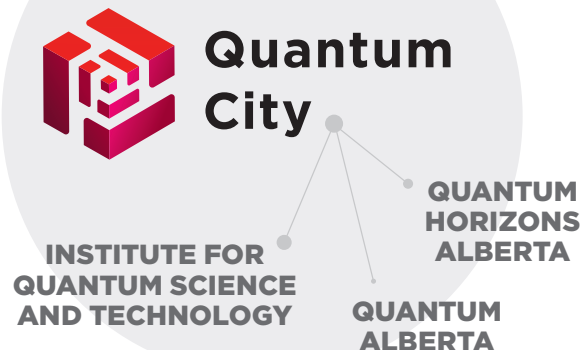
Internships in the Quantum Industry

Quantum City facilitates internships with innovative organizations at the forefront of quantum technology, providing students with hands-on experience and exposure to cutting-edge research.

Collaborations with the Research Community

By working with leading research networks within Alberta's quantum ecosystem—such as Quantum Alberta, the Institute for Quantum Science and Technology and Quantum Horizons Alberta—Quantum City strengthens the research community and drives advancements in quantum science and technology.

The growing quantum
research community



QUANTUM TECHNOLOGY ECOSYSTEM IN ALBERTA

Alberta's technology ecosystem brings together all essential components needed to tackle complex challenges across industries.

Quantum City is a key player in this landscape, guiding organizations in identifying where quantum technologies fit within broader solutions. By connecting research, industry and entrepreneurship, the focus remains on integrating quantum where it delivers the greatest impact.



1 Research Excellence

Alberta is home to leading institutions—the University of Alberta, the University of Calgary and the University of Lethbridge—recognized for excellence in both theoretical and applied quantum research. With key research networks like Quantum Alberta and Quantum Horizons Alberta, innovation in quantum science and technology continues to advance, further strengthening expertise in the field.

2 Discovery Research

The University of Calgary's Canada Excellence Research Chair (CERC) in quantum science is driving progress by transforming theoretical breakthroughs into emerging quantum technologies. At the University of Calgary, the Institute for Quantum Science and Technology (IQST) leads cutting-edge research in key areas of quantum science and technology, provides world-class education and training, and strengthens collaboration with both academic institutions and industry partners. The Quantum Major Innovation Fund (QMP) project has further accelerated research, fostered partnerships and supported technological advancements, reinforcing Alberta's position as a leader in quantum innovation.





3 Innovation & Commercialization

Alberta's quantum ecosystem is built on a strong foundation of entrepreneurship and commercialization support. The University of Calgary fosters startup growth through initiatives like the Hunter Hub for Entrepreneurial Thinking, Innovate Calgary and UCEED—Canada's largest university-based fund. Specializing in quantum innovation, QAI Ventures empowers startups by providing essential resources, acceleration programs and investment funding to help early-stage quantum companies scale globally.

Quantum City's industry engagement programs bridge researchers and businesses to develop practical solutions, while Alberta Innovates and private investors provide essential funding and support. Quantum City's qLab offers advanced infrastructure for quantum technology development, and the University of Alberta's nanoFAB provides open-access micro- and nanoscale fabrication and characterization facilities. Together, these resources empower quantum technology creators, fostering a dynamic ecosystem for innovation and commercialization.

4 Industry Adoption

Alberta is a leader in industry adoption of quantum technologies and solutions implementation, with a strong ecosystem that connects research, startups, and key economic sectors such as agriculture, energy, finance and telecommunications. Programs like the Quantum City Global Challenge Series and Solutions Studio offerings accelerate the transition from quantum technology to practical solutions for real-world applications. With world-class research facilities, strong institutional support and a growing network of investors and technology adopters, Alberta is well-positioned to drive industry transformation through quantum advancements.



“The eyes of the world are on you and that's a good thing... It's important for Alberta to be seen as a global leader in this space.”

Nate Glubish
*Minister of Technology & Innovation
Government of Alberta*



Quantum City

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something.**