

# Canadian quantum technology research and development partnering mission to Germany



Canada and Germany have a long history of collaborating to advance market-driven research and development (R&D), and encouraging joint projects between businesses from both countries.

## Canadian small and medium-sized enterprises (SMEs)

### 1QBIT

[www.1qbit.com](http://www.1qbit.com)

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1QBit is a global leader in advanced computing. From industry-level problem definition and algorithm selection to R&D that guides hardware innovation for industrially applicable quantum computing, 1QBit takes on computationally intensive problems at multiple layers of the quantum software stack.

1QBit seeks to partner with quantum hardware companies. 1QBit is open to a variety of collaboration arrangements ranging from providing a full-stack perspective to guide the hardware innovation of new technologies to creating software tools to help apply more-developed technological solutions.

### AGNOSTIQ

[www.agnostiq.ai](http://www.agnostiq.ai)

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Agnostiq develops software tools that make quantum and high performance computing resources more accessible to enterprises and developers. Along with algorithmic research, Agnostiq is developing Covalent, an open source workflow orchestration platform for quantum and high-performance computing (HPC).

Agnostiq is seeking new users of its Covalent platform along with potential R&D collaborators in the areas of optimization, simulation, and quantum machine learning.

## **ANYON SYSTEMS**

[www.anyonsys.com](http://www.anyonsys.com)

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Anyon Systems is a vertically integrated provider of superconducting universal quantum computers (custom quantum processing unit (QPU), electronics and cryogenics). Anyon Systems delivered a unit to the Canadian Defense Forces and sold a second unit to a high-performance computing (HPC) centre. Anyon Systems' focus is on-premise machines that connect to classical supercomputers.

As a provider of integrated quantum computers, Anyon Systems is looking to connect with early adopters that have interest in near-term intermediate-scale quantum computers; government agencies, HPC centers, universities and leading technology companies. Anyon Systems is also interested to meet potential investors.

## **CIRCUITMIND INC (D.B.A SOLID STATE AI)**

[www.solidstate.ai](http://www.solidstate.ai)

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Solid State AI develops and deploys Artificial Intelligence for Manufacturing Systems (AIMS), an AI software that enables manufacturers to increase the quality and number of products produced whilst decreasing the effects on the environment. Solid State AI's customers are semiconductor, aerospace and automotive manufacturers.

Solid State AI's preferred partners are manufacturers looking to maximize their profit margins by improving operational and manufacturing efficiencies of their production lines. Solid State AI intends to build commercial relationships with partners where use of AIMS increases their profit margins.

## **DIAS GEOPHYSICAL**

[www.diasgeo.com](http://www.diasgeo.com)

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Dias develops technology, builds equipment and collects data for imaging the subsurface. Dias's customers include mining companies, environmental consulting firms, and engineering groups. The focus of the company is on producing high volume datasets that support robust geologic modelling.

Dias is looking for partners that have capabilities in using quantum computing for solving inversion problems or the ability to improve sensors for magnetic or gravitational sensing.

## **EVOLUTIONQ**

[www.evolutionq.com](http://www.evolutionq.com)

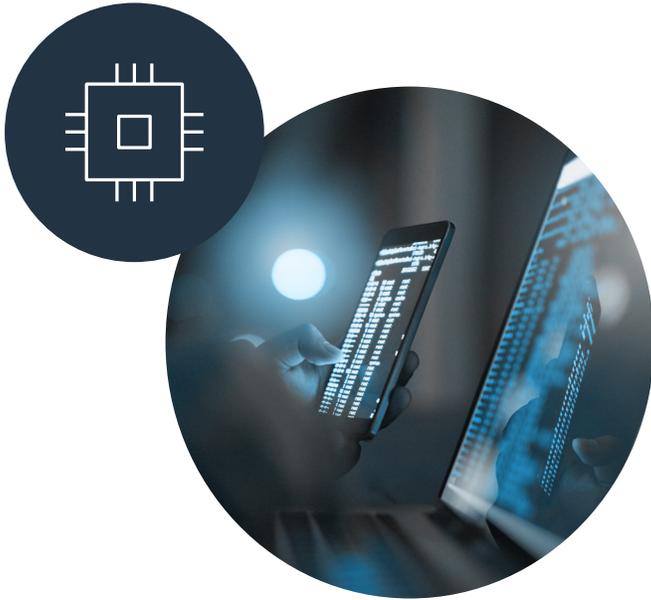
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evolutionQ is a leading quantum-safe cybersecurity company led by world-renowned quantum computing experts Dr. Michele Mosca and Dr. Norbert Lütkenhaus. evolutionQ delivers quantum-risk management strategy and advisory services along with robust cybersecurity products designed to be safe against quantum computers. For more information, visit [www.evolutionq.com](http://www.evolutionq.com) or follow @evolutionQInc on Twitter.

Critical infrastructures such as financial services, telecommunications, manufacturing, and government are the sectors we target. We can show how to overcome quantum key distribution (QKD) integration challenges for uses cases benefitting from the advanced security and resilience provided by QKD. We would also like to learn about emerging industry specific use cases that change the feature set and deployment scenarios.



### **HIGH Q TECHNOLOGIES INC.**

[www.highqtechnologies.com](http://www.highqtechnologies.com)

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High Q develops highly sensitive electron paramagnetic resonance (EPR) systems that provide distance measurements on biomolecules. Their quantum microwave device and control methods deliver high-performance, easy to use instruments that offer revolutionary measurement capabilities to solve complex problems in protein dynamics.

High Q's preferred partners are drug hunters and structural biologists within the pharmaceutical industry and academic institutions. They are looking for Principal Investigators and researchers who have experience with EPR, cryo electron microscopy (EM), nuclear magnetic resonance (NMR), fluorescence resonance energy transfer (FRET) or other highly sensitive biophysical techniques.

### **NANOACADEMIC TECHNOLOGIES INC.**

[www.nanoacademic.com](http://www.nanoacademic.com)

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Nanoacademic builds atomistic and quantum simulation tools to predict the properties of next generation materials and devices. Their software is being used by materials science researchers and quantum computer designers, in public, and private institutions around the world to reduce R&D costs.

Nanoacademic is seeking to engage with public and private organizations of all sizes conducting R&D in quantum technologies (focus on spin qubits design). Nanoacademic is also seeking theorists or experimentalists developing new materials in all applicative domains to study electronic, structural, optical, and magnetic properties.

### **QUANTROPI INC.**

[www.quantropi.com](http://www.quantropi.com)

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Quantropi is a cybersecurity company that provides quantum-secure encryption solutions to governments and Global 2000 enterprises. Its QiSpace™ platform offers the ability to secure data, networks, and systems against today's cyberattacks and tomorrow's attacks from quantum computers.

Quantropi is looking to engage with companies in telecom, financial services, automotive, healthcare, network infrastructure, embedded systems, and cybersecurity that are looking to more securely protect their data, networks, and systems today, and prepare for Y2Q and the looming quantum threat.

## Canadian organizations

### **NATIONAL RESEARCH COUNCIL OF CANADA, GERMANY**

[canada.ca/nrc-germany](http://canada.ca/nrc-germany)

#### **Dr. Jennifer E. Decker,**

Consul and Principal Advisor  
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The National Research Council of Canada (NRC) in Germany is a point of entry for researchers and businesses in Germany who are interested in research and development collaborations with the NRC, or with innovative Canadian companies.

Research areas include: emerging technologies (nanotechnology, measurement science and metrology, information technology, quantum technology), engineering (aerospace, automotive, transportation and construction), and life sciences (biologics, vaccines, medical devices and bio-based resources).

### **MITACS**

[www.mitacs.ca](http://www.mitacs.ca)

#### **Mohammadreza Rezaee,** National Quantum

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Mitacs is the key link between private sector and post-secondary institutions, driving collaborations at home and abroad to develop projects which solve organizational challenges, and develop Canada's innovation capacity. Mitacs has funded more than 1,000 internship units in quantum domain to date.

Mitacs is interested in collaborative projects between academic centers and industry partners. Industries across the entire quantum tech spectrum, that are interested to participate in research and development projects with Canadian academic partners, are most welcome to contact us.

### **NATIONAL RESEARCH COUNCIL OF CANADA INDUSTRIAL RESEARCH ASSISTANCE PROGRAM**

[canada.ca/nrc-irap](http://canada.ca/nrc-irap)

#### **Andrew Bauder,** Industrial Technology Advisor

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The National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) provides advice, connections, and financial support to help Canadian small and medium-sized enterprises (SMEs) increase their innovation capacity and take ideas to market through co-innovation with international partners. Through our international programs, we provide businesses with the support they need to successfully enter international markets and global value chains.

We partner with national organizations and other government departments such as Global Affairs Canada, and we collaborate with many countries and international markets including the European Union, Germany, United Kingdom, Japan, Israel, South Korea, India, and Brazil. We provide support in a number of key areas, including direct financial support to small and medium-sized businesses with international interests, business and technology partnering, and collaborative research and development projects.



## QUANTUM VALLEY IDEAS LABORATORIES

[www.qvideaslab.ca](http://www.qvideaslab.ca)

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Quantum Valley Ideas Laboratories (QVIL) is a research organization developing and commercializing quantum technology to address compelling market needs. Current research in quantum sensors for radio frequency (RF) applications using Rydberg atom vapour cells will be transformative for measurement, communications, and radar markets.

QVIL is seeking partnerships with large product companies or research labs in the radio frequency (RF) test and measurement, communications, and radar markets. Partners would have a vision and technical ability to integrate quantum RF sensor-based solutions into their product development roadmap.

## QUÉBEC QUANTIQUE

[www.quebec-quantique.ca](http://www.quebec-quantique.ca)

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Québec Quantique is a community of interest that wishes to catalyze and ensure concerted action among local players around innovative and structuring projects for Quebec and position the latter as one of the leaders in the field of quantum science and technologies on the international scene.

Québec Quantique is seeking collaboration with organizations that align with similar objectives of the organization, such as ecosystem building, economic development, startups, tech transfer, innovation, and international collaboration. Québec Quantique is also interested in meeting companies interested in the North American market.





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