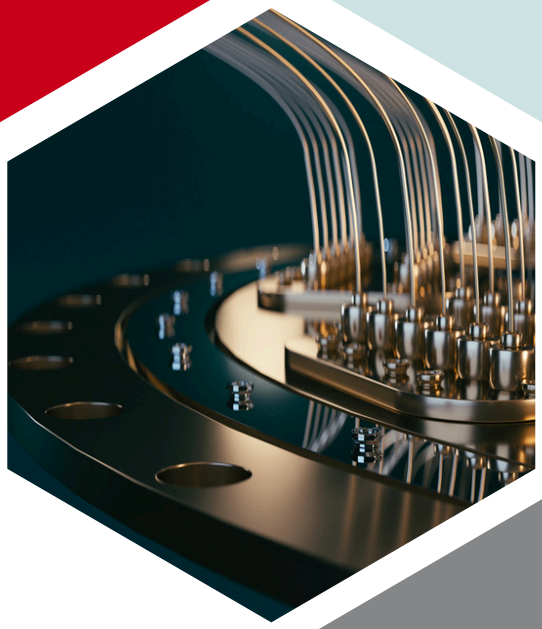

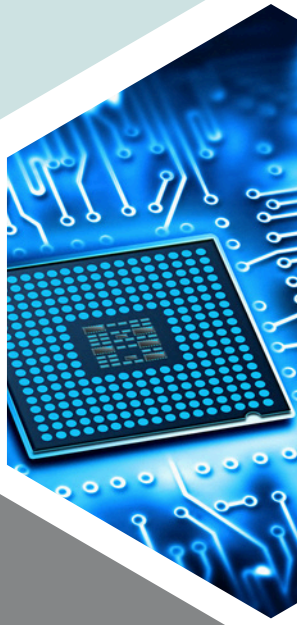

C2MI

MiQro Innovation
Collaborative Centre

HIGHLIGHTS REPORT

2023-2024

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Message from the Chairman of the Board

Claude Jean

Dear members, partners and collaborators,

As 2023-2024 comes to an end, I would like to share a few words on behalf of the Board of Directors. The past year has been filled with many stimulating challenges and new opportunities that consolidate both our objectives and our vision, confirming the essential role of the microfabrication industry.

We pursued our growth strategy through investments which will enable us to leverage our capabilities to meet the emerging and evolving needs of our members, partners and customers. Thanks to a dedicated team and a sound governance, we have succeeded in launching several promising initiatives, including quantum technologies and sustainable microfabrication, that are advantageously positioning us to face the future.

As we take a closer look at the future, our determination is strengthened, prompting us to pursue our mission with the same passion and values that are at the core of our success. We are confident that the current and future projects will continue to reinforce our position as a leader and a catalyst that drives change in our industry.

I would like to extend my warmest thanks to each and every member of the Board, to our dedicated employees, to our partners and to our members for their renewed confidence and their valuable contribution. Together, what we have achieved is remarkable, and I am convinced that our optimism and dynamism are the assets which will enable us to successfully tackle the challenges of the future.

I invite you to explore the highlights report of this outstanding year in detail, and to share with us your thoughts on how you can help shape a promising future.

Claude Jean

Message from the Chief Executive Officer

Marie-Josée Turgeon

Another exciting year behind us! A year in which the C2MI has confirmed its position as a leading innovation center, helping to make Quebec a leader in digital technologies. The C2MI boosted its reputation, both domestically and internationally.

Following President Joe Biden's visit in March 2023, The semiconductor industry and C2MI have been going through a feverish period, as the crucial, cross-disciplinary role of microfabrication has been clearly highlighted. Thanks to the commitment of our team and the collaboration of our members, we were able to seize the many opportunities that arose to play a central role in strengthening the North-American semiconductor supply chain.

Our success is based on the synergy between our researchers, industrial partners and academic institutions, and is multiplied by our Integrated Innovation Chain and our digital and quantum innovation zones. Strategic collaborations remain at the heart of our business model. In 2023-2024, we established new partnerships that expanded our network and enriched our innovation ecosystem. These collaborations enable us to push back the frontiers of technology, accelerate the development of cutting-edge solutions and respond effectively to changing industry needs.

We have put in place a number of initiatives to reduce our environmental footprint and promote sustainable practices in our operations and products. We have joined forces with leading players in our industry to ensure that we are at the forefront of positive change. We have also continued to invest time and energy in setting up and supporting programs that promote local training and innovation.

It is essential to emphasize that our achievements would not have been possible without the unwavering support of the provincial and federal governments. Their financial contributions and commitment to promote technological innovation have been crucial to our success. Their investments have enabled us to develop state-of-the-art infrastructures, strengthen our research capacity and support innovative projects that position Quebec and Canada as world leaders in digital technologies and microfabrication.

I would like to express my sincere thanks to our dedicated team, our loyal partners and our experienced administrators for their constant support. Your commitment, hard work and passion are the driving forces behind our success. We have built a center of excellence that not only stands out for its innovations, but also for its positive impact on society.

Marie-Josée Turgeon

The North American semiconductor supply chain

In recent years, the United States has intensified its efforts to strengthen its semiconductor supply chain, creating new opportunities for industry players. The C2MI, with its strategic location and proven expertise, was able to seize these opportunities. Following the visit of President Joe Biden in March 2023, our center has been propelled to the forefront as a critical partner in strengthening North American semiconductor manufacturing capabilities. Through close collaboration with U.S. companies and cross-border initiatives, C2MI broadened its partnerships network and consolidated its international reputation as a world-leading semiconductor R&D center through a number of initiatives and events.

Trilateral discussions

The C2MI and its strategic partners played an active role in trilateral exchanges at the North American Semiconductor Conference, held in Washington on May 18 and 19, 2023. This major event brought together experts, decision-makers and industry leaders from the three North American nations - Canada, the United States and Mexico - to discuss the challenges and opportunities of the semiconductor supply chain.

C2MI and its partners made a significant contribution to the discussions, highlighting the importance of collaboration to strengthen resilience and innovation within this critical sector. Their participation focused on technological advances and research initiatives underway, while exploring new avenues for increased cooperation between participating countries.

Strategic exchanges with the United States

Bilateral exchanges

Our CEO took part in a number of notable events hosted by U.S. Ambassador to Canada, as well as the US Consul General for the the Montreal office, asserting the commitment and implication of our organization in strengthening the bilateral relations between our two nations. These enriching dialogues have enabled us to identify concrete avenues for future collaboration, both in terms of commercial exchanges and research and development initiatives.

Research and business partnership opportunities with Texas

We took part in strategic meetings organized by the Canadian Consulate General in Dallas and Austin, Texas, to explore the opportunities offered by the Texas Chip Act. In parallel, we also engaged in constructive discussions with the Quebec delegation in Houston.

These many discussions demonstrate our commitment in playing an active role in promoting economic and trade relations between Canada and the United States. They also reflect our determination to be a valued partner in cross-border initiatives contributing to the prosperity and security of our two countries.

Growing synergies

Northeastern Semiconductor Manufacturing Corridor Workshop
The objective of this workshop is to advance collaboration within the semiconductor industry within the Bromont / Albany corridor. This event stems from a joint commitment by U.S. President Biden and Prime Minister Trudeau to promote a Northeastern semiconductor manufacturing corridor in this part of the continent during President Biden's state visit to Canada in March 2023. Discussion forums, including workforce development, innovation and investment are contributing to the advancement of collaborative perspectives within the Northeast region, and fostering future joint initiatives.

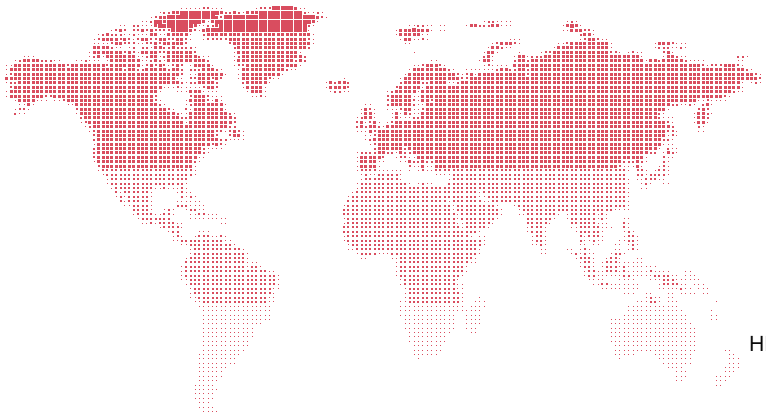
Monterrey Tecnológico, School of Engineering and Science
As part of a tour of leading-edge Canadian facilities, the C2MI was privileged to welcome representatives from Monterrey. This institution has a strong microelectronics and photonics group. The institute is also at the heart of a vast network of industrial and academic partners in this sector.

Collaboration agreement with NY CREATES
The C2MI has concluded a partnership agreement with NY CREATES, representing a major step forward in its international collaboration strategy. NY CREATES is a leading player in the field of technological innovation in the United States. The goal of this partnership is to facilitate the exchange of knowledge, research projects and the development of new technologies. Jointly, we are exploring opportunities to accelerate the innovation and commercialization of advanced technologies through our respective capabilities and opening up new avenues for research and development.

Foreign chief executives discover the C2MI
Technum Québec, C2MI, IBM Canada and Teledyne MEMS are pleased to welcome a delegation of heads of consular posts in Quebec for a day dedicated to innovation zones.

As a result 28 foreign representatives who, through the Ministère des Relations internationales et de la Francophonie, were able to discover the exceptional expertise and know-how of our digital technology innovation zone which raises Québec's profile as a world leader in this field.

Partnerships and opportunities are on the rise for C2MI, and we intend to keep spreading the word in North America.



Europe, an undeniable partner

Europe and Canada share a long-standing, strong economic partnership, and the semiconductor sector is no exception.

One of the co-awardees of the Nobel Prize in Physics (2022) visits C2MI

As part of the University of Sherbrooke's Grandes Conférences and, more specifically, the first Symposium on the Applications of Quantum Science, C2MI and its partners among the Integrated Innovation Chain were honored to welcome Professor Alain Aspect, winner of the 2022 Nobel Prize in Physics.

"Quantum theory is the most successful in the history of physics!"
- Alain Aspect.

LN2 Conference

The C2MI is delighted to work closely with LN2 to make its colloquiums an unmissable and eagerly-awaited event. The biennial colloquium alternates between territories in France and Quebec. Since its first edition in 2012, as an international laboratory (LIA), Unité Mixte Internationale (UMI) and the International Research Laboratory (IRL), LN2 has hosted symposiums bringing together researchers, industry leaders and students. LN2, Laboratoire Nanotechnologies Nanosystèmes, is a research organization that links the Université de Sherbrooke (Canada) and the Centre National de la Recherche Scientifique, CNRS (France) under the status of IRL (International Research Laboratory / IRL 3463). LN2 is also supervised by INSA de Lyon, École Centrale de Lyon (ECL) and Université Grenoble Alpes (UGA).

C2MI joins the Quebec delegation at the PIC Summit Europe in the Netherlands

C2MI was part of the Quebec delegation at the Photonic Integrated Circuits (PIC) SummitEurope 2023 in Eindhoven, the Netherlands. This conference enables participants to discuss innovation and new technologies developed in the optoelectronics and photonics sectors.

Photonic chips (PIC) leverage the power of light to create microchips that are energy-efficient, faster and more precise. Our scientists are always on the lookout for eco-responsible solutions, and photonics offers several very interesting avenues in this field.

A central role on the national scene

As a strong advocate of its provincial and national ecosystem C2MI is actively promoting domestic talent and companies.

Demystifying intellectual property

To shed light on the concepts of intellectual property, we hosted a webinar entitled *"Demystifying intellectual property in Canada. What tools are available?"*. This webinar was made possible thanks to the support of speakers from the Canadian Intellectual Property Office (CIPO) and ExplorerPI. The attendees learned about the intellectual property resources available to them.

Understanding the semiconductor industry

The American Chamber of Commerce in Canada (AMCHAM) and the Conseil du Patronat organized a webinar entitled *"Semiconductors: understanding the stakes and opportunities for Quebec"*. Our CEO, Marie-Josée Turgeon, was pleased to introduce all the facets of our industry, which offers technological solutions that are transforming the world.

A First Canadian Semiconductor Symposium

Our CEO, Marie-Josée Turgeon, took part as a panelist in the first Canadian Semiconductor Symposium organized by the Canadian Semiconductor Council (CSC) in February 2024 in Ottawa. She shared her expertise on the theme of *"Building a Competitive Semiconductor Ecosystem: Harnessing a Powerful Economic Engine"*. She was given the opportunity to demonstrate and explain how our ecosystem is a success story in the world of semiconductors.

The Minister of Innovation, Science and Industry assesses the impact of our industry

The Honorable François-Philippe Champagne toured C2MI, accompanied by ministers Pascale St-Onge and Marie-Claude Bibeau, as well as MP Élisabeth Brière. They were able to gauge the importance of semiconductors, while getting acquainted with the many technological applications developed at C2MI thanks to the numerous collaborations, contributing to the success of companies involved in many sectors of the Canadian economy.

Promising partnerships

In the last few months, C2MI has officialized some promising collaborations, underlining our commitment to innovation and technological advancement. These strategies strengthen our leading position in microelectronics and advanced systems. An overview of milestone initiatives

Attestation d'Études Collégiales (AEC) program
C2MI and its partners have set up an Attestation of Collegial Studies (AEC) program in Maintenance, Automation and Control, in collaboration with an academic institution. This program is designed to meet the growing needs of our industry by training skilled technicians in critical fields. The students benefit from high-quality practical and theory-based teaching, focusing on cutting-edge technologies and the skills needed to excel in the microelectronics sector, as well as having the opportunity to put their skills to the test in an industrial environment.

Partnership agreement with Institut National d'Optique (INO)
INO and C2MI have concluded a partnership to develop the semiconductor industry in the fields of photonics and quantum technologies in Quebec. This collaboration is designed to combine their expertise and promote the mutualization of infrastructures, accelerating innovation and the development of specialized components, in response to the increasing demand as well as supply challenges within the technology market.

Public research center
C2MI has been officially designated as a public research center, a status that enables companies who sign a qualified research contract with us to benefit from an attractive tax credits.
In fact, companies can, under specific conditions, request a tax credit for all or part of the research carried out with us for all or part of the eligible scientific research and experimental development (R&D) expenses incurred during the fiscal year under these contracts for work carried out within Quebec.

These new and promising partnerships underline C2MI's commitment to being at the forefront of technological innovation. Working with leading academic and industrial partners, we strive to continually push the boundaries of scientific research and experimental development.
C2MI remains committed to playing a central role in building an advanced and thriving technological future.

Our major projects

C2MI expansion

The C2MI expansion project, adding 3,000 m^2 to the existing 15,000 m^2,announced in June 2022, started in February 2024 and is well underway.

The vision of the expansion

The new facility is designed to ensure that C2MI becomes a global player in the quantum field, producing superconducting chips specifically designed to meet the needs of this sector. The new capabilities will enhance collaborative research skills and promote advanced design of components required to build superconducting quantum computers.

C2MI firmly intends to stand out in the fields of advanced assembly and advanced sensors, thus propelling the technologies currently in place within the center a step further into the future.These technologies, complementary to U.S. investments, will allow C2MI ecosystem to secure its strong position within the North American supply chain.

Ecoresponsible and carbon neutral projects

C2MI is committed to meet the objectives put forward by the provincial and federal governments in line with the Paris Agreement, i.e. to reduce our CO2 emissions by 37.5% by 2030 and achieve carbon neutrality by 2050. An aggressive objective, but achievable with the implementation of a comprehensive plan that began with the measurement of C2MI's CO2 emissions balance and the complete life-cycle analysis of our facilities, all in collaboration with LIRIDE (Laboratoire interdisciplinaire de recherche en ingénierie durable et écoconception).

The remainder of the plan includes a series of projects structured around four axes which will ensure a constant reduction in the level of CO2 emissions. The four main axes are: enabling technologies, raw material reduction, alternative materials, and energy and water efficiency, with the ultimate objective of providing intelligent cleanrooms. In the first axis, the enabling technologies developed, such as silicon photonics or printed electronics, will enable the substitution of current technologies with a potential 50% reduction in energy consumption. The second axis aims to reduce the raw materials used, with a direct impact on emissions on the manufacturing site, such as the project to reduce process gases, or an indirect impact by reducing the impact of upstream emissions in the supply chain, such as the projects to rebuild wafers and ink-jet deposition. The third axis, alternative materials, involves research and characterization of bio-sourced materials meeting the the microelectronics industry standards. Finally, the last axis focuses on the infrastructures needed to maintain the conditions required for semiconductor manufacturing in a context of sustainable development, making efficient use of water and energy resources.

To support our process gas reduction project, we have joined the Semiconductor Climate Consortium, an initiative of the world organization SEMI, which brings together the key players in the semiconductor industry. The C2MI has therefore become a test center for new process gases for the semiconductor industry.

In conclusion, we firmly believe that the success of our ecoresponsible actions and projects depends on our ability to raise awareness among stakeholders throughout the supply chain, and to implement winning conditions to make eco-design of processes an integral part of our R&D activities. Technological innovation must go hand in hand with ecological and sustainable responsibility.

Boost community outreach

Community involvement

C2MI supports its employees by providing them with the opportunity to make a positive impact in their community through volunteer activities with local organizations. This year, some employees worked on the embellishment of landscaping at **La Maison Au Diapason**, a palliative care center, while others contributed to the completion of a new bike path and the restoration of urban furniture at **Bromont National Cycling Centre**.

Causes close to our hearts

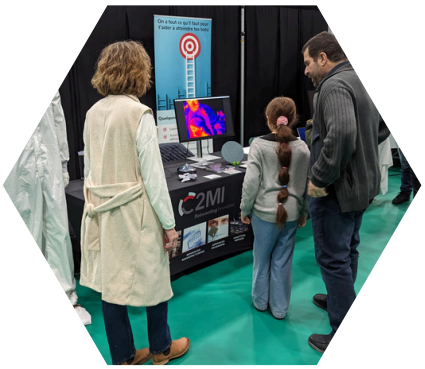
In recent years, C2MI has teamed up to participate in the **Défi EnBarque**, a fundraising event organized by the Fondation du Centre Hospitalier de Granby. This fundraising event consists of a friendly dragon-boat competition, with the profits going towards spécific projects to improve and support mental health.

Supporting women in science

C2MI was also present at the FORCE conference (for Training, Tooling, Networking, Awareness-raising and Exposure to role models). This symposium is intended for graduate and postgraduate students future and new teachers, professionals and organizations working in sciences and engineering

Boosting the next generation

C2MI took part in the Expo MégaGÉNIALE organized by the Université de Sherbrooke, an event promoting science to youth and a broad public.



We also supported a student project for the regional robotics tournament held during the **Robotic First Québec robotics festival** held at Montreal's Olympic Stadium. We continued our support at **the Robotic First World Championship** in Houston, Texas.

C2MI in numbers 2023-2024[1]

INVESTMENTS

19,1M$
In capital investments by the partners

79,4M$
Invested in R&D

PATENTS

42
Patents and industrial secrets obtained

30
Pending patents

PROJECTS

32
Industry - university collaboration projects worth **22,6M$**

148
Industrial projects

NEW BUSINESS OPPORTUNITIES

324
New products addressed

RELATED JOBS

2405
Jobs related to new products development

52
Professors associated with industry - university projects

131
Highly Qualified Personnel industry trained

[1] Data April 1st, 2023 to March 31, 2024

Economic benefits 2010-2024[1]

303,6 M$
In capital investments by the partners

More than **285** industry - university collaboration projects worth **180,6 M$**

709,4 M$
Invested in R&D

2174
New business opportunities for our partners

986
Innovative industrial projects

More than **1231** HQP[2] industry trained

534
Patents and industrial secrets obtained

508
Intellectual property agreements

1933
New products associated with more than **19 236** jobs person-year

[1] Data April 1st, 2023 to March 31, 2024
[2] Highly Qualified Personnel

Events 2023

Throughout 2023-2024, several members of our team traveled to Canada, the United States and Europe to represent C2MI at various conferences and events. These representations are essential to raise awareness of C2MI's unique model and expand our ecosystem.

APRIL

20 International bilateral meeting - Northeastern Semiconductors Manufacturing Corridor, Albany, NY, USA.

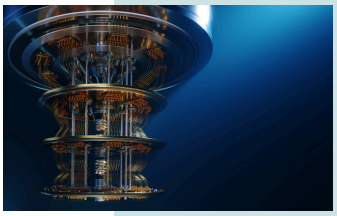
MAY

04 Effervescence 2023 Conference, Montreal, QC, Canada.

17 CPES 2023 - Printable, flexible and hybrid electronics, Montreal, QC, Canada.

23 MSTC, Cambridge, MA, USA.

30 ECTC - Electronic Components and Technology Conference, Orlando, FL, USA.



JUNE

12 Photonics North, Montreal, QC, Canada.

13 Automotive Testing Expo 2023 Europe, Germany.

20 Inside Quantum Technology Canada, Montreal, QC, Canada.

JULY

11 Semicon West - Flex Conference, San Francisco, CA, USA.

AUGUST

16 RQÉMP - The Quebec Student Group on Advanced Materials, Sherbrooke, QC, Canada.

SEPTEMBER

06 Eptech, Montreal, QC, Canada.

OCTOBER

15 MicroTAS 2023, Poland.

19 Conference "Quantum Collision: its impact on the corporate world is approaching!", Centech, Montreal, QC, Canada.

19 "Hardtech Innovation - Re-launching the hardtech community in Quebec" conference, Montreal, QC, Canada.

NOVEMBER

06 MEMS and SENSORS Executive Conference, Phoenix, AZ, USA.

07 PIC SUMMIT EUROPE conference, the Netherlands.

08 Hardtech - Canada's Premiere Technology and Innovation Summit, Markham, ON, Canada.

17 Canadian Defense and Security Market Symposium, Montreal, QC, Canada.

26 High Level Forum (HLF) conference, France.

Events 2024

JANUARY

09 CES - Consumer Electronics Show, Las Vegas, NV, USA.

20 CUWiP - University of Montreal Women in Physics Conference, Montreal, QC, Canada.

21 IEEE MEMS Conference, Austin, TX, USA.

27 Photonics West, San Francisco, CA, USA.

FEBRUARY

22 Companies day at École de technologie supérieure (ÉTS), Montreal, QC, Canada.

MARCH

18 Propulsion Québec - RDV en route, Montreal, QC, Canada.

18 IMAPS Device Packaging Conference, Fountain Hills, AZ, USA.

24 OFC, San Diego, CA, USA.

Celebrating excellence

This year, we were honoured to receive awards and distinctions that testify to our commitment to excellence and innovation. These recognitions underscore our dedication to offer quality solutions and contribute positively to our industry. We are proud to share these successes with our team and partners, who have played an essential role in our collective achievement.

"Outstanding woman in the field of hybrid flexible and STEM electronics" Award

RECOGNITION FOR OUR CEO

MARIE-JOSÉE TURGEON

At the Canadian Printable Electronics Symposium 2023 (CPES), organized by the IntelliFLEX Innovation Alliance, our CEO Marie-Josée Turgeon was awarded the "Outstanding Woman in Hybrid Flexible and STEM Electronics" Award.

"Best research project" Award

BEST RESEARCH PROJECT

C2MI AND ÉCOLE DE TECHNOLOGIE SUPÉRIEURE (ETS)

For the project carried out in partnership with École de technologie supérieure on the printing and assembly of copper circuits that withstand JEDEC reliability tests, C2MI received the "Best Research Project" award.

Christophe Sansregret (C2MI) and Sylvain G. Cloutier (ÉTS) proudly received the award on behalf of the entire team who worked on this new technology.

"Equity, Diversity and Inclusion" Award

BEST PRESENTATION FOR EDI ASPECTS

KAREL CÔTÉ WINS THE HONORS

As part of his presentation at the MEMS & Sensors Technical Congress held at the Massachusetts Institute of Technology (MIT), Karel Côté won the award for the Equity, Diversity and Inclusion section of his presentation.

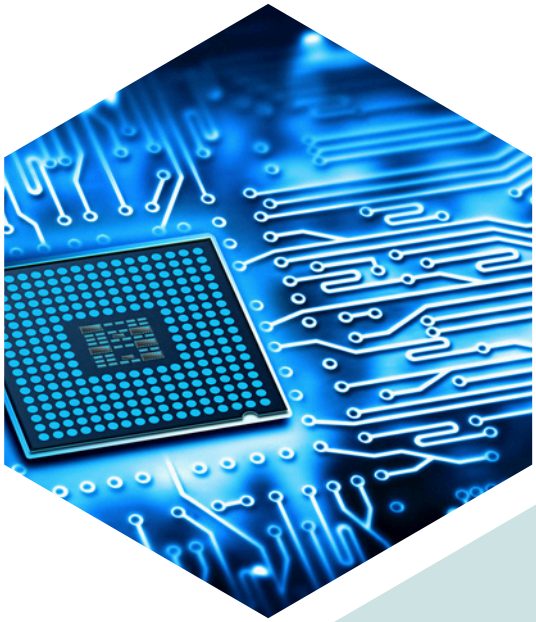
Governance

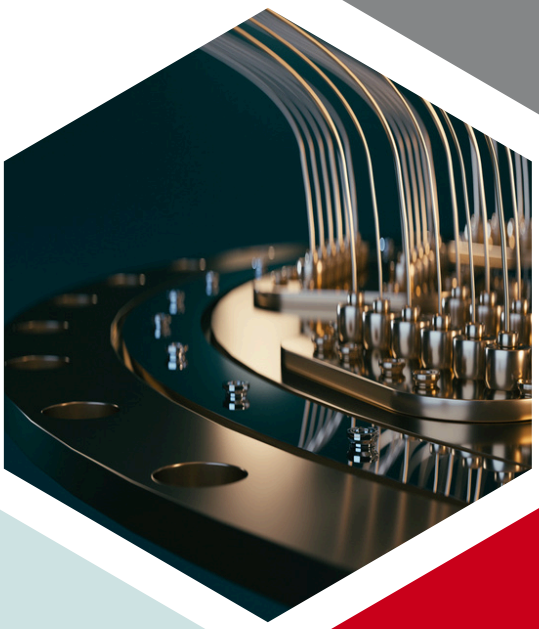
The C2MI has benefited from an engaged and passionate board of directors since its creation. Each board member brings valuable expertise and experience to the management of our constantly evolving collaboration center. We thank them for taking the time to share best practices and discuss strategies to improve the C2MI and its ecosystem.

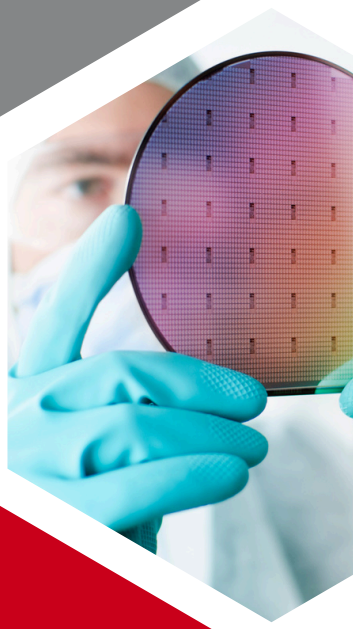
Officers

Directors

Observator







C2MI

MiQro Innovation Collaborative Centre - C2MI

45, boulevard de l'Aéroport, Bromont (QC) J2L 1S8

www.c2mi.ca 450 534-8000

Québec

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