

256 start-ups over 25 years

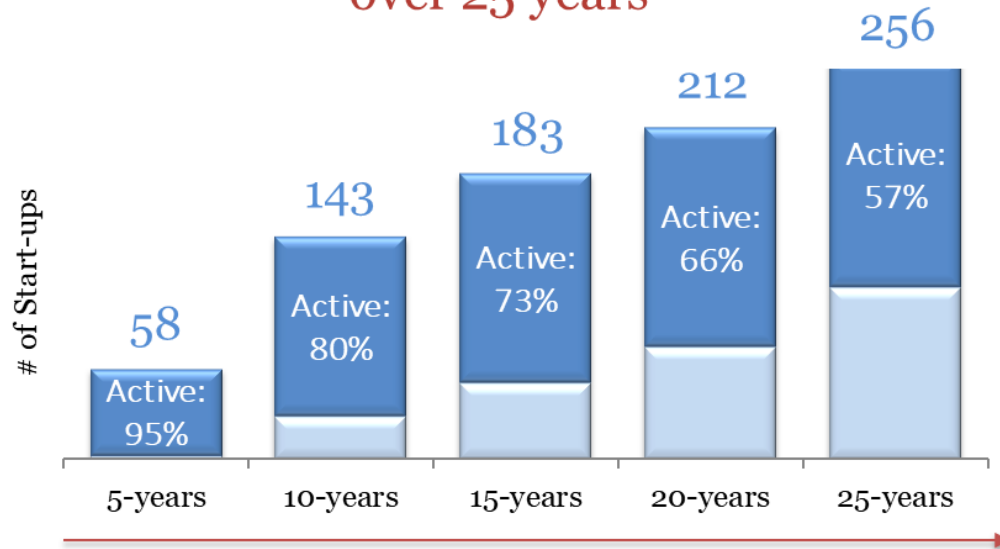
CMC-provided infrastructure contributes to Canadian start-ups



CMC-enabled start-ups: 1999 through March 2024
Updated: 2024-06-11

57% of start-ups remain Canadian controlled & active

256 CMC-enabled start-ups
over 25 years



VIE

Tools for start-ups
CMC's Virtual Incubator
Environment
www.CMC.ca/VIE

- 10-year survival rate: **80%**
- Period: 1999 – 2022/23. Based on actual data only. Company names not specified prior to 1999.
- Inactive status: acquired, dissolved or unknown (as of June 2024).

Start-ups – examples:

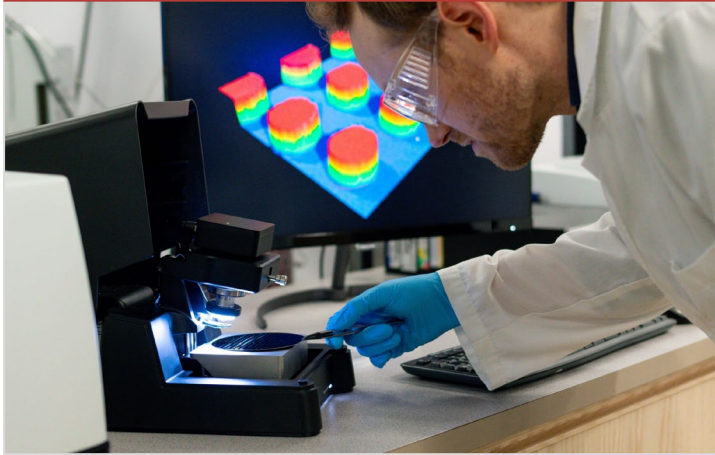
CMC-provided infrastructure contributes to Canadian start-ups



Start-up Success Story

Launches Redux AFM platform

ICSPI Corp.



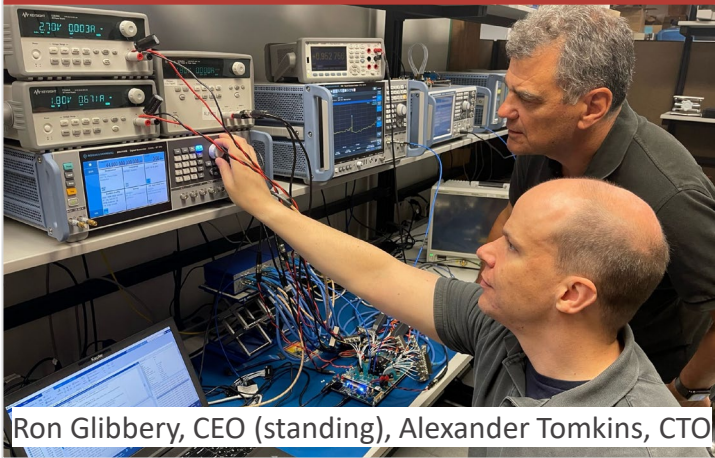
- > [Redux](#) Atomic Force Microscopy (AFM) is used for research and quality control in nanotechnology and materials science (including semiconductors), molecular engineering, physics, cell biology, health sciences, and more.
- > [ICSPI](#), founded in 2007, continues to grow with game-changing technology and products – their [nGauge](#) AFM system, launched in 2017, is currently installed in over 30 countries.

- University of Waterloo
- Raafat Mansour, Neil Sarkar

Start-up Success Story

Peraso Inc. offers solutions that are ahead of the curve

Peraso Inc.



Ron Glibbery, CEO (standing), Alexander Tomkins, CTO

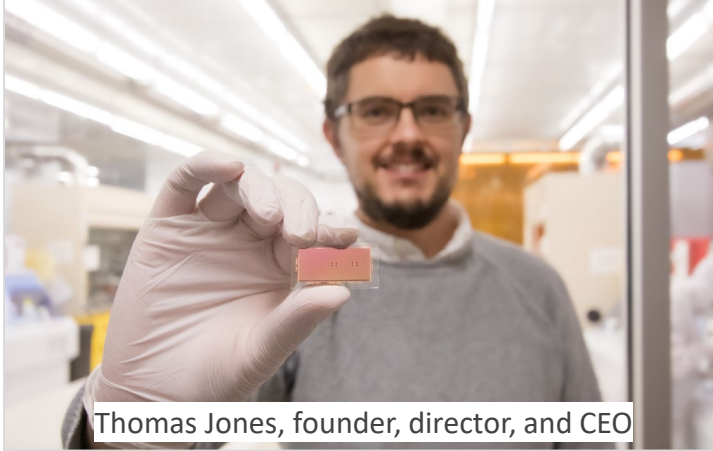
- > It would be 10 years before the wireless industry caught up with the solution offered by [Peraso](#) – a semiconductor company born out of CMC-enabled academic research in 2009 – now using its mmWave expertise to address the 5G market.
- > The company's technology found traction in the emergence of the fixed-wireless access (FWA) market, where mmWave technology is replacing the need for digging optic fibers.

- University of Toronto
- Sorin Voinigescu

Start-up Success Story

Greater Bandwidth for Next-Generation Mobile Communications

Jones Microwave Inc.



Thomas Jones, founder, director, and CEO

■ University of Alberta

Photo credit: Sanghamitro Das

- > [Jones Microwave](#) developed a light-activated switch that controls microwaves at high frequencies and increases communications bandwidth – essential for 5G technology, and Internet of Things (IoT).
- > The fabrication lab [nanoFAB](#) (University of Alberta) is producing the switch, which has been patented.
- > *“CMC supported me throughout my PhD and post-doc and now as I build my own company.”*

Start-up Success Stories

Calogy Solutions



Making better batteries for
the EV revolution

Université de Sherbrooke
Mahmood Shirazy, Luc Fréchette

Mazlite

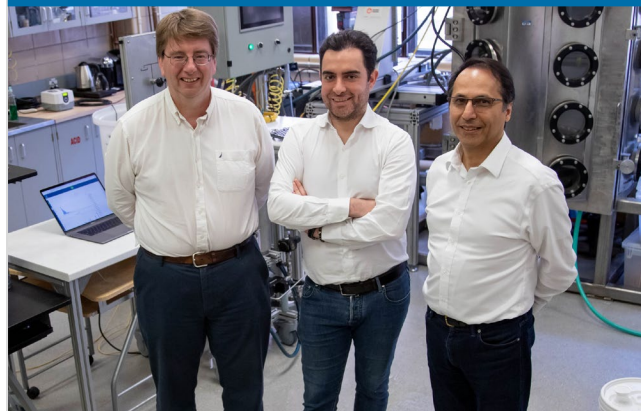


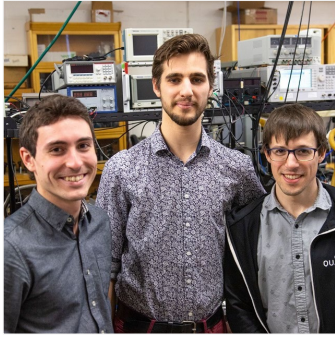
Photo credit: Reinier deSmit

Sizing up an industrial solution

University of Toronto
Pierre Sullivan, Amirreza Amighi,
Nasser Ashgriz

More start-up success story examples – read the full stories online:
www.CMC.ca/SuccessStories

A quantum sensor for
the mining sector



SBQuantum

Université de Sherbrooke
Dr. David Roy-Guay

Intelligent antennas for
the Internet of Things



SenZIoT

University of Alberta
Dr. Pedram Mousavi
Dr. Rashid Mirzavand

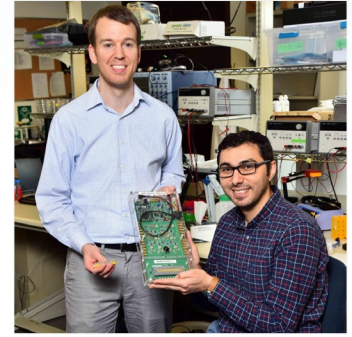
Developing ultra-sensitive
vibration sensors



**axSense
Technologies**

Simon Fraser University
Dr. Behraad Bahreyni

Rapid sensing that targets
bacterial infections



Micromensio

University of Toronto
Dr. Brendan Crowley
Dr. Enver Kilinc

5 years: 58 Start-ups

2019/20 – 2023/24

“CMC allowed us to do cutting-edge research at a fraction of what it would have cost. We could afford to make prototypes, test them, and iterate the process. This enabled us to find our solution more quickly.”

“We could not have done this without CMC. Canada should be proud to have this institution and I hope it is around for many years to come.”

- F. Nabki (Co-founder)
SPARK Microsystems





CMC-provided infrastructure contributes to start-ups

5-year Impact	2019-20	2020-21	2021-22	2022-23	2023-24	5-year:
Start-up Companies*	10	14	8	12	14	58

14 New Start-up Companies, 2023-24

Company	University	Company	University
Advance Measurement Technique	Université de Sherbrooke	Lumatus Semiconductor	University of Waterloo
Aarish Technologies	McGill University	PreFab Photonics	McGill University
Beeta Biomed	McGill University	OptoBiomeDx	University of Alberta
Carbosonic Technologies	Université de Sherbrooke	R&E Med Co	University of Manitoba
Epsilon	Polytechnique Montréal	Tycho	University of Manitoba
Heatometrics	Simon Fraser University	VitaWireless	University of Alberta
IOSome	McGill University	[undisclosed]	Université Laval



12 Start-up companies reported in 2022-23

Company	University	Company	University
Caotech	McGill University	MATRIUS Technologies	École de technologie supérieure
Chiral Quantum	University of Waterloo	OptiFab Technologies	University of Waterloo
Enurgen	University of Ottawa	Palitronica	University of Waterloo
Kimia Analytics	University Of Toronto	RHBD Systems	University of Saskatchewan
KryoZesto	University of Alberta	SiFi Labs	Université Laval
LenSense	Queen's University	[undisclosed]	McGill University

5-year Impact	2018	2019-20	2020-21	2021-22	2022-23
Start-up companies	20	10	14	8	12

- Startup companies based on actual data only.
- Change to fiscal year reporting in 2019/20 for consistency with funder reporting cycles. Updated: 2023-07-05



8 Start-up companies reported in 2021-22

Company	University	Company	University
Boreal Conductors Inc.	Polytechnique Montréal	Jones Microwave Inc.	University of Alberta
Calogy Solutions	Université de Sherbrooke	Mangrove Lithium	University of British Columbia
ISDF - Intelligence Systems Design and Fabrication	University of Waterloo	Zinite Corporation	University of Alberta
LightSail	Western University	Axonal Networks [undisclosed in 2021/22]	McGill University

5- year Impact	2017	2018	2019-20	2020-21	2021-22
Start-up companies	15	20	10	14	8

- Startup companies based on actual data only.
- Change to fiscal year reporting in 2019/20 for consistency with funder reporting cycles. Updated: 2023-06-21



14 Start-up companies reported in 2020-21

Company	University	Company	University
AquaSensing	University of Waterloo	NerveX	University of Toronto
Bio6	Université Laval	NovusTx Devices	Lakehead University
BioGraph Sense	University of Waterloo	Scope Photonics	University of Waterloo
ELeapPower	University of Toronto	PiAndPower	University of Waterloo
Gold Sentintel	University of Waterloo	Tidal Medical	University of Waterloo
Nord Quantique	Université de Sherbrooke	Wave View Imaging	University of Calgary
Northern Quantum Lights	University of Waterloo	[undisclosed]	McGill University

Impact	2016	2017	2018	2019-20	2020-21
Start-up companies	16	15	20	10	14

- Startup companies based on actual data only.
- Change to fiscal year reporting in 2019/20 for consistency with funder reporting cycles. Updated: 2023-06-21



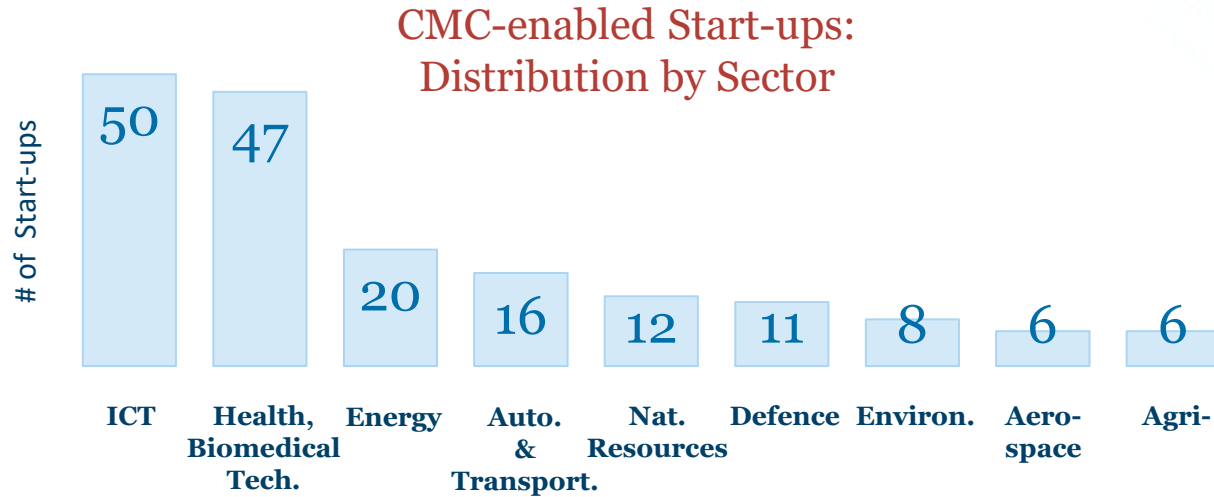
10 Start-up companies reported in 2019-20

Company	University	Company	University
ALPHAXON	University of Waterloo	PulseMedica Corp.	University of Alberta
CliniSonix Inc.	University of Alberta	SB Quantum	Université de Sherbrooke
Dream Photonics	University of British Columbia	Sonus Microsystems	University of British Columbia
Metabolic Insights	Simon Fraser University	Tartan AI	University of Toronto
MISO Chip	Polytechnique Montréal	2704304 Ontario Limited	University of Toronto

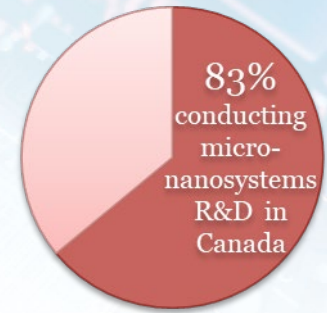
5-year Impact	2015	2016	2017	2018	2019-20
Start-up companies	21	16	15	20	10

- Startup companies based on actual data only.
- Change to fiscal year reporting in 2019/20 for consistency with funder reporting cycles. Updated: 2023-06-21

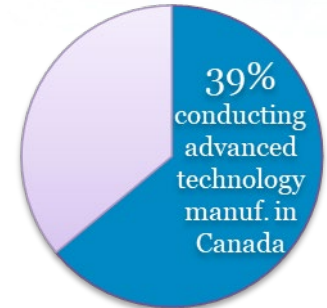
Innovation in high growth sectors



n = 96 | Start-ups map to one or more sectors | CMC Industry Study 2020/21 | Period: 2010 – 2020



Research &
Development



Advanced
Technology
Manufacturing

Work with us: www.CMC.ca/Spotlight



Collaborative R&D Projects

CMC can provide technical resources and funding for collaborative R&D projects. Learn more about our current projects.



Virtual Incubator Environment

A bundle of CAD and simulation design tools and technologies to accelerate startups' design of innovative products.



Commercial Services

Fabrication, Packaging & Assembly, R&D Products and Services for Industry and Academics-not-in-Canada



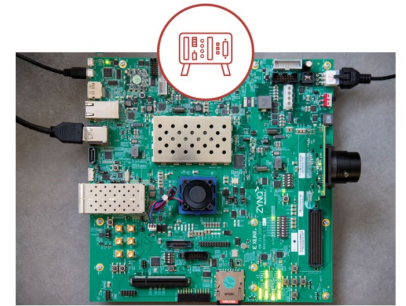
Virtual Incubator Environment (VIE)

For researchers, start-ups & SMEs

A bundle of design tools and technologies to accelerate your design of innovative products.

- > Design and simulation tools
- > CMC R&D services: prototyping, testing, and packaging
- > State-of-the-art fabrication access: low cost MPW for low volume prototyping
- > Network: industry/academic research in Canada

Contact: sales@CMC.ca



www.CMC.ca/VIE

Thank you!

Gordon Harling

President & CEO

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Appendix A

Regional: 5-year period



Western
28%

Ontario
38%

Quebec
34%

Eastern
-%

WESTERN Canada

CMC-provided infrastructure contributes to start-ups



16 Start-up companies reported in past 5 years

Company	University Year	Prov.	Company	University Year	Prov.
Heatometrics	Simon Fraser University (2023-24)	BC	Mangrove Lithium	UBC (2021-22)	BC
OptoBiomeDx	University of Alberta (2023-24)	AB	Wave View Imaging	University of Calgary (2020-21)	AB
R&E Med Co	University of Manitoba (2023-24)	MB	Zinite Corporation	University of Alberta (2021-22)	AB
Tyco	University of Manitoba (2023-24)	MB	CliniSonix Inc.	University of Alberta (2019-20)	AB
VitaWireless	University of Alberta (2023-24)	AB	Dream Photonics	UBC (2019-20)	BC
KryoZesto	University of Alberta (2022-23)	AB	Metabolic Insights	Simon Fraser University (2019/20)	BC
RHBD Systems	Univ. of Saskatchewan (2022/23)	SK	PulseMedica Corp.	University of Alberta (2019-20)	AB
Jones Microwave Inc.	University of Alberta (2021-22)	AB	Sonus Microsystems	UBC (2019/20)	BC

ALBERTA

CMC-provided infrastructure contributes to start-ups

8 Start-up companies reported in past 5 years

Company	University Year
OptoBiomeDx	University of Alberta (2023-24)
VitaWireless	University of Alberta (2023-24)
KryoZesto	University of Alberta (2022-23)
Jones Microwave Inc.	University of Alberta (2021-22)
Zinite Corporation	University of Alberta (2021-22)
Wave View Imaging	University of Calgary (2020-21)
CliniSonix Inc.	University of Alberta (2019-20)
PulseMedica Corp.	University of Alberta (2019-20)

ONTARIO

CMC-provided infrastructure contributes to start-ups



22 Start-up companies reported in past 5 years

Company	University Year	Company	University Year
Lumatus Semiconductor	University of Waterloo (2023-24)	ELeapPower	University of Toronto (2020-21)
Chiral Quantum	University of Waterloo (2022-23)	Gold Sentintel	University of Waterloo (2020-21)
Enurgen	University of Ottawa (2022-23)	Northern Quantum Lights	University of Waterloo (2020-21)
Kimia Analytics	University Of Toronto (2022-23)	NerveX	University of Toronto (2020-21)
LenSense	Queen's University (2022-23)	NovusTx Devices	Lakehead University (2020-21)
OptiFab Technologies	University of Waterloo (2022-23)	Scope Photonics	University of Waterloo (2020-21)
Palitronica	University of Waterloo (2022-23)	PiAndPower	University of Waterloo (2020-21)
ISDF - Intelligence Systems Design and Fabrication	University of Waterloo (2021-22)	Tidal Medical	University of Waterloo (2020-21)
LightSail	Western University (2021-22)	ALPHAXON	University of Waterloo (2019-20)
AquaSensing	University of Waterloo (2020-21)	Tartan AI	University of Toronto (2019-20)
BioGraph Sense	University of Waterloo (2020-21)	2704304 Ontario Limited	University of Toronto (2019-20)

QUÉBEC

L'infrastructure fournie par le CMC contribue à la création d'entreprises

20 Entreprises en phase de démarrage signalées au cours des 5 dernières années

Entreprise	Université Année	Entreprise	Université Année
Advance Measurement Technique	Université de Sherbrooke (2023/24)	SiFi Labs	Université Laval (2022/23)
Aarish Technologies	Université McGill (2023/24)	[non déclarée]	Université McGill (2022/23)
Beeta Biomed	Université McGill (2023/24)	Boreal Conductors	Polytechnique Montréal (2021/22)
Carbosonic Technologies	Université de Sherbrooke (2023/24)	Calogy Solution	Université de Sherbrooke (2021/22)
Epsilon	Polytechnique Montréal (2023/24)	Axonal Networks	Université McGill (2021/22)
IOSome	Université McGill (2023/24)	Bio6	Université Laval (2020/21)
PreFab Photonics	Université McGill (2023/24)	Nord Quantique	Université de Sherbrooke (2020/21)
[non déclarée]	Université Laval (2023/24)	[non déclarée]	Université McGill (2020/21)
Caotech	Université McGill (2022/23)	MISO Chip	Polytechnique Montréal (2019/20)
MATRIUS Technologies	ÉTS (2022/23)	SBQuantum	Université de Sherbrooke (2019/20)

Appendix B



Canada's Semiconductor Ecosystem, Accelerated

FABrIC is a 5-year \$200M+ project led by CMC and thirteen other founding organizations to secure Canada's future in advanced semiconductor design and manufacturing

www.CMC.ca/FABrIC

Led by 14
founding
partners

300+
User
groups

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FABrIC is a project proposal to Canada's Federal Government with a start date in 2024, subject to funding.