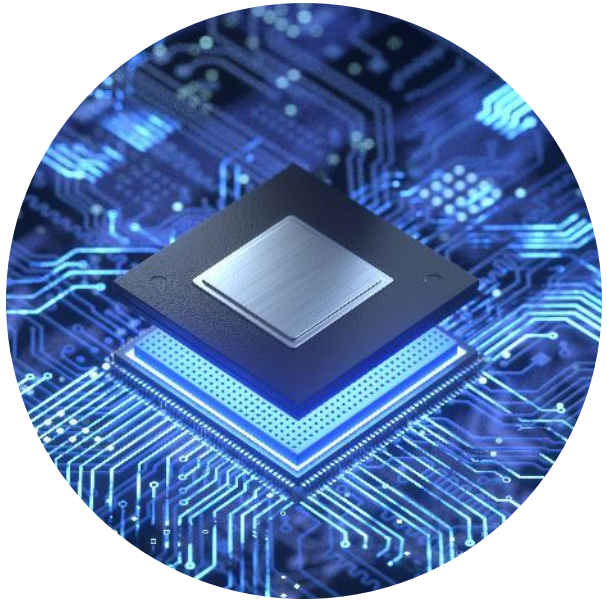
CMC Microsystems

25-years & 244 start-ups

CMC-provided infrastructure supports Made-in-Canada innovation

CMC Microsystems
Made-in-Canada prototypes since 1984



A dynamic ecosystem enabling Canadian innovation

CMC Microsystems (CMC) is a not-for-profit organization that accelerates research and innovation in advanced technologies, including microelectronics, photonics, microelectromechanical systems (MEMS), Internet of Things (IoT), Artificial Intelligence (AI), and quantum software and hardware.

CMC enables R&D, and the training of highly qualified personnel (HQP) for an international network of over 11 000 researchers and more than 1 200 companies developing innovations in advanced technologies.

CMC – Contributing to Canadian Start-Ups

CMC provides access to leading-edge technologies, enhances research capability for researchers and start-ups and supports development of HQP essential to Canada's competitiveness.

These start-ups represent 10% of the 1 200 Canadian companies collaborating to develop innovations and hiring HQP within CMC's network.

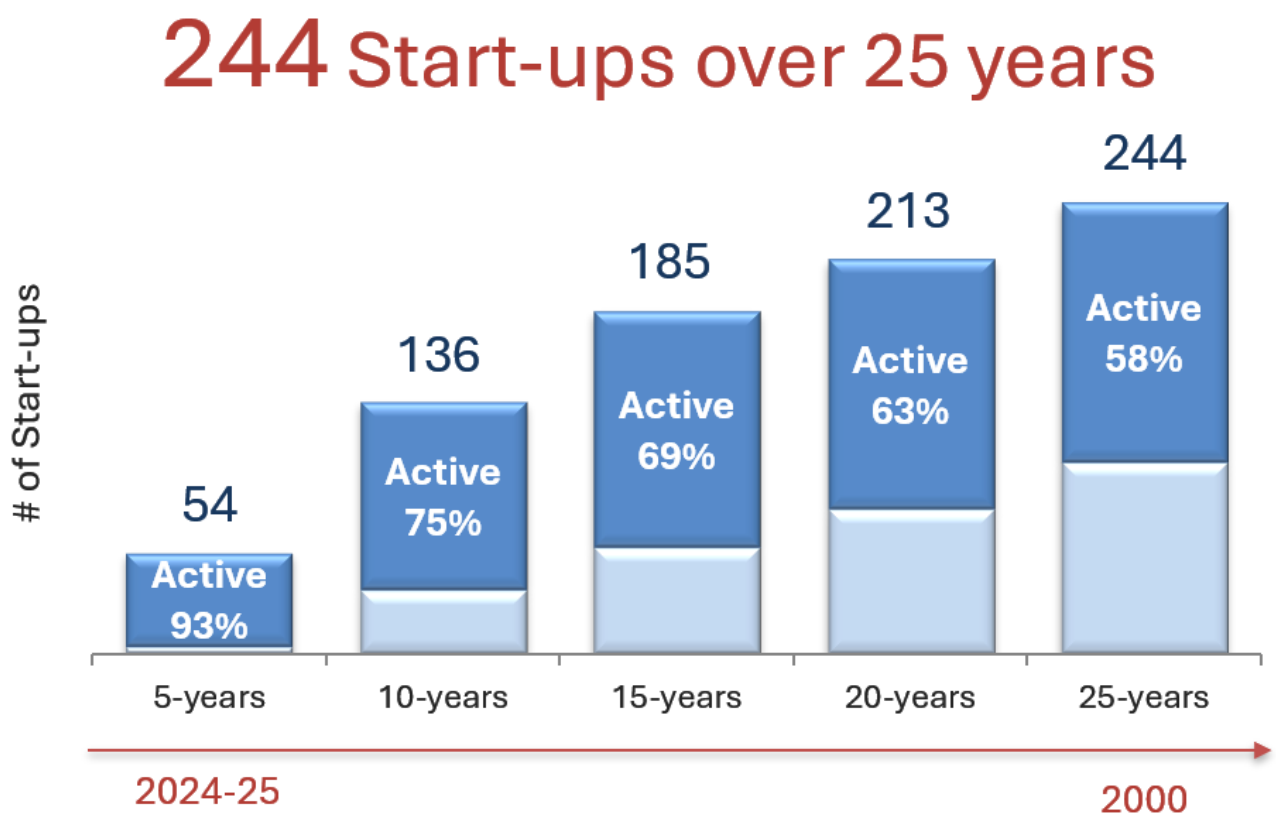
Contact us to learn more:
www.CMC.ca/Commercial-Services

244 Start-ups over 25 years

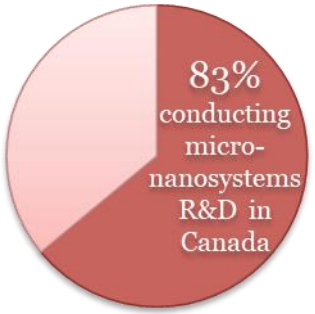
58%

remain Canadian controlled & active

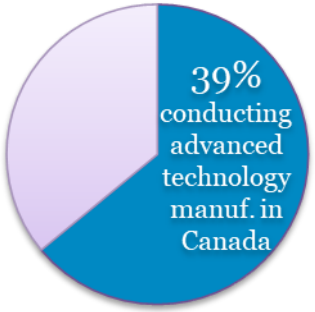
- Start-ups reported from 1994 – 2024/25: 290
- 25-year period: 2000 – 2024/25: 244 (of 290)
- Based on actual data only.
- Company names not specified prior to 1999.
- Inactive status: acquired, dissolved or unknown (as of July 2025)



Innovation in high growth sectors

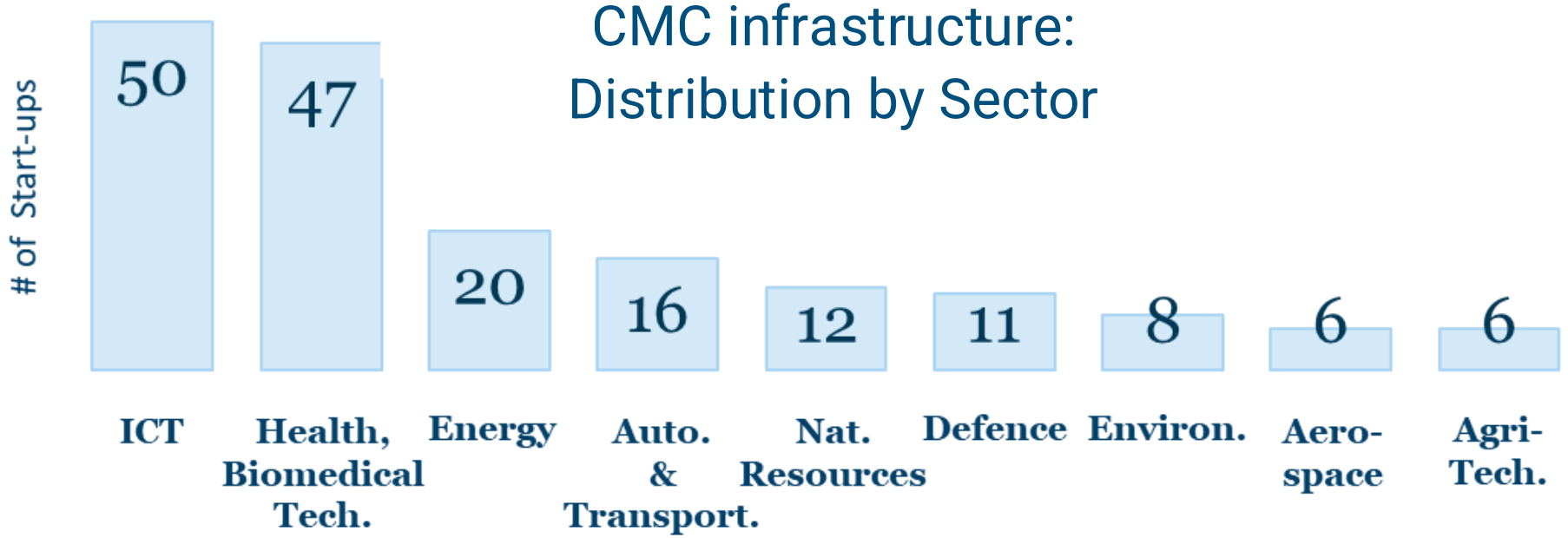


Research & Development



Advanced Technology Manufacturing

Start-ups Enabled by CMC infrastructure: Distribution by Sector



- n = 96 | Start-ups map to one or more sectors | CMC Industry Study represents 10-year period 2010 – 2020
- The product level most descriptive of where value is added was identified. We believe this serves as a proxy for start-ups who benefit from advanced micro-nano technologies.

Start-ups & supply chain value-add

32%

of start-ups offer System Products – finished product(s) that may incorporate several system applications

Supply Chain Positions

32%	System Products	System product (unit)
25%	System Applications	Programmable platforms, networks, application software, bio-functionalization, databases, models (component for an application)
23%	Platform Components	Packaging, domain interfaces, interconnects and hardware, embedded software, embedded molecular functionalization, programmable hardware, models (component with a technical function)
16%	Hardware Device Domains	Electronics, photonics, optoelectronics, microfluidics, MEMS, emerging technology, models (defined material or model)
4%	Material Systems	Materials

- n = 96 | Start-ups map to one or more sectors | CMC Industry Study represents 10-year period 2010 – 2020
- The supply chain position most descriptive of where value is added was identified. We believe this serves as a proxy for start-ups who benefit from advanced micro-nano technologies.

Start-up Success Stories

CMC-provided infrastructure supports Made-in-Canada innovation design, prototyping and commercialization – contributing to Canadian start-ups

Alentic
AMT
DREAM PHOTONICS
enedym
Enurgen
LUMATUS SEMICONDUCTOR
METABOLIC INSIGHTS
MISO CHIP
motsai
Nord Quantique
QuantWave
SILQ CONNECT
sonus Microsystems
STRIVONIX

Logos are trademarks or registered trademarks of their owners.

Lumatus Semiconductor – Revolutionary technology: better AR/VR, industrial, automotive & military displays

Through effective power supply management strategies, and expertise creating MicroLED media and transferring these onto TFT backplanes, they have enhanced the brightness of flat panel displays while reducing their energy consumption from 30-50%.

Battery longevity is paramount in defence applications, as is a secure supply chain to manufacture sensitive technology. Cockpit instrumentation, command & control systems, avionics, and other vehicle systems increasingly use headsets to display critical data to military personnel.

"CMC is working towards building a secure semiconductor future for the Canadian ecosystem… strong manufacturing capacity in Canada will be a huge benefit for companies like us."

- Mario Montana, CEO & Co-Founder

[Read the success story…]

Lumatus Semiconductor

- University of Waterloo
- Manoj Sachdev,
- William Wong

ICSPI Corp. – Launches Redux AFM platform

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.

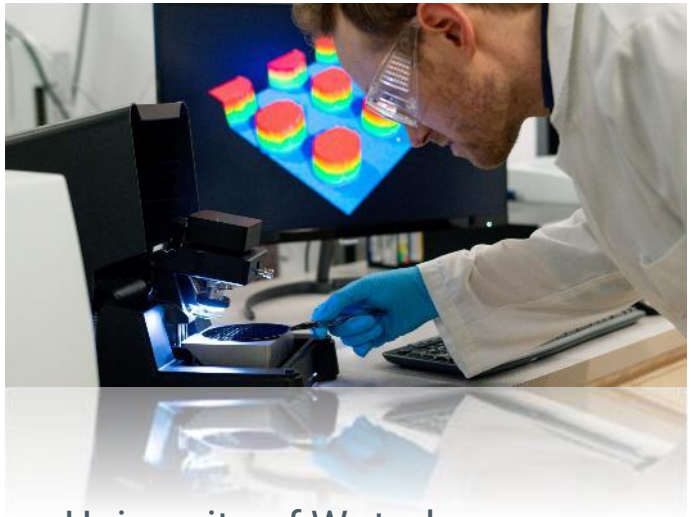
ICSPI, founded in 2007, continues to grow with game-changing technology and products – their nGauge AFM system, launched in 2017, is currently installed in over 30 countries.

"This has been a 10-year journey. CMC supported us the entire way from the initial launch of the company through to commercialization and servicing international clients."

- **David Morris, Director of Operations**

Read the success story…

ICSPI Corp.



- University of Waterloo
- Raafat Mansour,
- Neil Sarkar

Photo Courtesy ICSPI

Peraso offers solutions that are ahead of the curve

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.

Read the success story…

- In March of 2023, GaN Systems Inc., was acquired by Infineon Technologies AG for $830-million USD

Peraso Inc.

- Pictured, Ron Gilibbery, CTO; Alexander Tomkins, CTO
- University of Toronto
- Sorin Boinigescu

Jones Microwave – Greater bandwidth for next-generation mobile communications

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."

- Thomas Jones, Founder & CEO

Read the success story…

Jones Microwave

- Thomas Jones, Founder & CEO
- University of Alberta

Photo credit: Sanghamitro Das

Read these stories online: www.CMC.ca/SuccessStories

Calogy Solutions

[Making better EV batteries]

- Université de Sherbrooke
- Mahmood Shirazy,
- Luc Fréchette

Mazlite Inc.

[Sizing up an industrial solution]

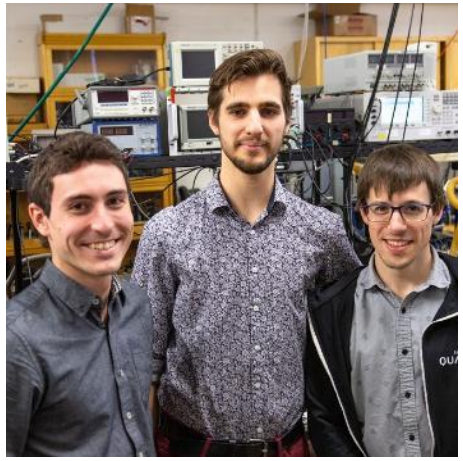
- University of Toronto
- Pierre Sullivan, Amirreza Amighi, Nasser Ashgriz

Photo credit: Reinier deSmit

Read these stories – and more – online: www.CMC.ca/SuccessStories

SBQuantum

A quantum sensor for the mining sector

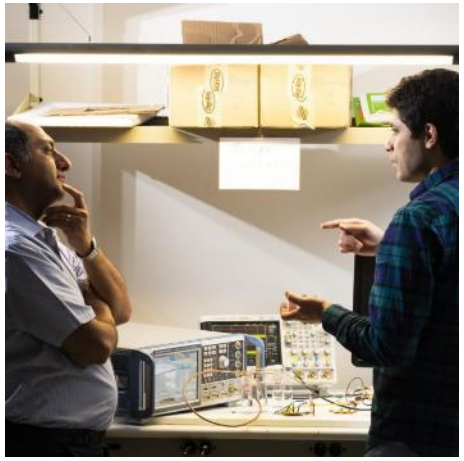


- Université de Sherbrooke
- David Rou-Guay

Photo credit:
Reinier deSmit, Brilliant Eye

SenZIoT

Intelligent antennas for the Internet of Things

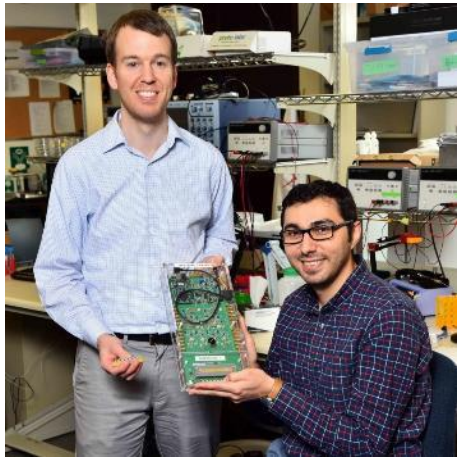


- University of Alberta
- Pedram Mousavi,
- Rashid Mirzavand

Photo credit: John Ulan/Photo Features

Micromensio

Rapid sensing that targets bacterial infections

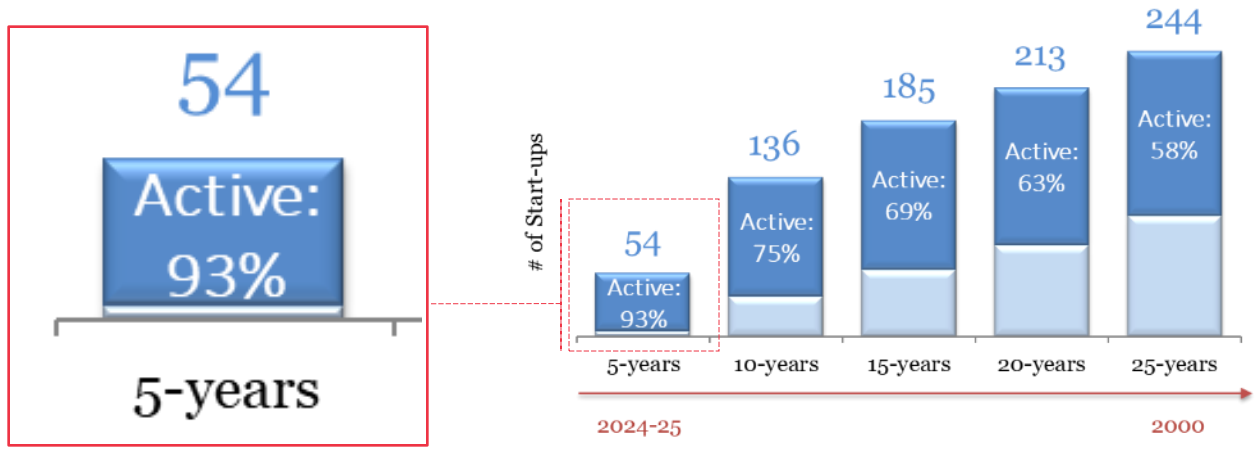


- University of Toronto
- Brendan Crowley,
- Enver Kilinc

Photo credit: Rodney Daw/Photo Features

5-Year Impact: 54 Start-ups

HIGHLIGHT: 2020/21 – 2024/25
50 (of 54) remain active in Canada



Start-up companies – reported in 5-years

54 Start-up companies reported in 5-years (1 of 2)

Company	University | Year	Company	University | Year
Advanced MicroTesting	Université de Sherbrooke | 2024-25	PreFab Photonics	McGill University | 2023-24
Anthea Technologies	University of Windsor | 2024-25	OptoBiomeDx	University of Alberta | 2023-24
Narval Energy	University of British Columbia | 2024-25	R&E Med Co	University of Manitoba | 2023-24
Phase Metron	University of Alberta | 2024-25	Tycho	University of Manitoba | 2023-24
SilQ Connect	Université de Sherbrooke | 2024-25	VitaWireless	University of Alberta | 2023-24
Strivonix	University of Waterloo | 2024-25	Caotech	McGill University | 2022-23
Advance Measurement Technique	Université de Sherbrooke | 2023-24	Chiral Quantum	University of Waterloo | 2022-23
Aarish Technologies	McGill University | 2023-24	Enurgen	University of Ottawa | 2022-23
Beeta Biomed	McGill University | 2023-24	Kimia Analytics	University Of Toronto | 2022-23
Carbosonic Technologies	Université de Sherbrooke | 2023-24	KryoZesto	University of Alberta | 2022-23
Epsilon	Polytechnique Montréal | 2023-24	LenSense	Queen's University | 2022-23
Heatometrics	Simon Fraser University | 2023-24	MATRIUS Technlogies	École de technologie supérieure | 2022-23
Lumatus Semiconductor	University of Waterloo | 2023-24	OptiFab Technologies	University of Waterloo | 2022-23

- Updated: 2025-07-31 | Startup companies based on actual data only. | Reporting period: 2020/21 through 2024/25.

Start-ups – reported in 5-years, cont.

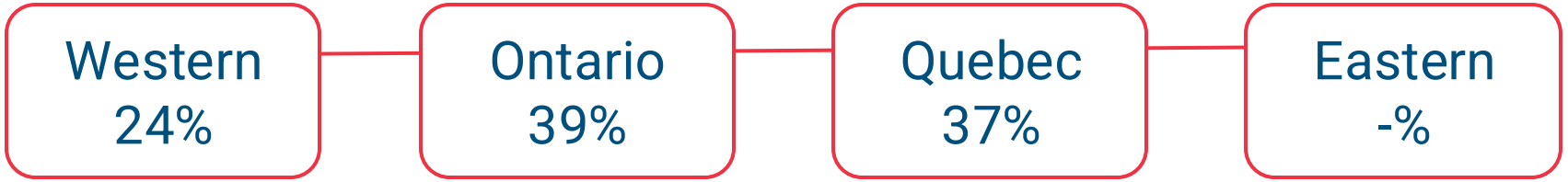
54 Start-up companies reported in 5-years (2 of 2)

Company	University | Year	Company	University | Year
Palitronica	University of Waterloo | 2022-23	Bio6	Université Laval | 2020-21
RHBD Systems	University of Saskatchewan | 2022-23	BioGraph Sense	University of Waterloo | 2020-21
SiFi Labs	Université Laval | 2022-23	ELeapPower	University of Toronto | 2020-21
[undisclosed]	McGill University | 2022-23	Gold Sentintel	University of Waterloo | 2020-21
Boreal Conductors Inc.	Polytechnique Montréal | 2021-22	Nord Quantique	Université de Sherbrooke | 2020-21
Calogy Solutions	Université de Sherbrooke | 2021-22	Northern Quantum Lights	University of Waterloo | 2020-21
ISDF - Intelligence Systems Design and Fabrication	University of Waterloo | 2021-22	NerveX	University of Toronto | 2020-21
LightSail	Western University | 2021-22	NovusTx Devices	Lakehead University | 2020-21
Jones Microwave Inc.	University of Alberta | 2021-22	Scope Photonics	University of Waterloo | 2020-21
Mangrove Lithium	University of British Columbia | 2021-22	PiAndPower	University of Waterloo | 2020-21
Zinite Corporation	University of Alberta | 2021-22	Tidal Medical	University of Waterloo | 2020-21
Axonal Networks	McGill University | 2021-22	Wave View Imaging	University of Calgary | 2020-21
AquaSensing	University of Waterloo | 2020-21	[undisclosed]	McGill University | 2020-21

- Updated: 2025-07-31 | Startup companies based on actual data only. | Reporting period: 2020/21 through 2024/25.

Regional: 5-Year Impact

54 Start-ups reported
2020/21 – 2024/25



WESTERN Canada
– CMC-provided infrastructure contributes to start-ups

13 Start-up companies reported in 5-years

Company	University | Year	Prov.	Company	University | Year	Prov.
Narval Energy	UBC (2024-25)	BC	VitaWireless	University of Alberta (2023-24)	AB
Phase Metron	University of Alberta (2024-25)	AB	KryoZesto	University of Alberta (2022-23)	AB
Heatometrics	Simon Fraser University (2023-24)	BC	RHBD Systems	Univ. of Saskatchewan (2022/23)	SK
OptoBiomeDx	University of Alberta (2023-24)	AB	Jones Microwave	University of Alberta (2021-22)	AB
R&E Med Co	University of Manitoba (2023-24)	MB	Mangrove Lithium	UBC (2021-22)	BC
Tyco	University of Manitoba (2023-24)	MB	Zinite Corporation	University of Alberta (2021-22)	AB
			Wave View Imaging	University of Calgary (2020-21)	AB

Other examples include Dream Photonics, UBC (2019-20); Metabolic Insights, SFU (2019/20); Sonus Microsystems, UBC (2019/20); CliniSonix, U Alberta (2019-20); PulseMedica Corp., U Alberta (2019-20).

- 12 (of 13) remain active in Canada.
- Updated: 2025-07-31 | Startup companies based on actual data only. | Reporting period: 2020/21 through 2024/25.

ONTARIO
– CMC-provided infrastructure contributes to start-ups

21 Start-up companies reported in 5-years

Company	University | Year	Company	University | Year
Anthea Technologies	University of Windsor (2024-25)	LightSail	Western University (2021-22)
Strivonix	University of Waterloo (2024-25)	AquaSensing	University of Waterloo (2020-21)
Lumatus Semiconductor	University of Waterloo (2023-24)	BioGraph Sense	University of Waterloo (2020-21)
Chiral Quantum	University of Waterloo (2022-23)	ELeapPower	University of Toronto (2020-21)
Enurgen	University of Ottawa (2022-23)	Gold Sentintel	University of Waterloo (2020-21)
Kimia Analytics	University Of Toronto (2022-23)	Northern Quantum Lights	University of Waterloo (2020-21)
LenSense	Queen's University (2022-23)	NerveX	University of Toronto (2020-21)
OptiFab Technologies	University of Waterloo (2022-23)	NovusTx Devices	Lakehead University (2020-21)
Palitronica	University of Waterloo (2022-23)	Scope Photonics	University of Waterloo (2020-21)
ISDF - Intelligence Systems Design and Fabrication	University of Waterloo (2021-22)	PiAndPower	University of Waterloo (2020-21)

- 20 (of 21) remain active in Canada.
- Updated: 2025-07-31 | Startup companies based on actual data only. | Reporting period: 2020/21 through 2024/25.

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
Advanced MicroTesting	Université de Sherbrooke (2024/25)	Caotech	Université McGill (2022/23)
SilQ Connect	Université de Sherbrooke (2024/25)	MATRIUS Technlogies	ÉTS (2022/23)
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)

- 18 (sur 20) sont toujours en activité au Canada.
- Mise à jour : 2025-07-31 | Les startups sont uniquement basées sur des données réelles. | Période de référence: de 2020/21 à 2024/25.

Let’s work together!

CMC builds connections across the Canadian semiconductor ecosystem

“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

25 years, 58% active companies

244

start-ups have been reported by researchers in the **past 25 years**. More than half remain Canadian controlled and active (141 of 224).

5-year Impact	2020-21	2021-22	2022-23	2023-24	2024-25	**5-year 54**
Start-ups	**14**	**8**	**12**	**14**	**6**	
10-year Impact	2015	2016	2017	2018	2019-20*	**10-year 136**
Start-ups	**21**	**16**	**15**	**20**	**10**	
15-year Impact	2010	2011	2012	2013	2014	**15-year 185**
Start-ups	**8**	**5**	**10**	**13**	**13**	
20-year Impact	2005	2006	2007	2008	2009	**20-year 213**
Start-ups	**2**	**7**	**9**	**7**	**3**	
25-year Impact	2000	2001	2002	2003	2004	**25-year 244**
Start-ups	**9**	**9**	**4**	**5**	**4**	

25-year period, 2000–2024/25: 244 (of 290 start-ups since 1994

- Updated: 2025-07-31 | Startup companies based on actual data only.

Strategic advanced technologies – critical to Canada's semiconductor ecosystem

CMC's strategies promote Canadian research, innovation and economic growth in **microelectronics, photonics, microelectromechanical systems (MEMS), Internet of Things (IoT), Artificial Intelligence (AI), and quantum software and hardware** – critical foundational semiconductor technologies.

- 13 500 designs have been fabricated through CMC and our global supply chain partnerships.
- Over 1 690 prototypes (of 13 500) were in photonics and optoelectronics (since 2007); with 67% of those in silicon photonics – many via the world's 1st fabrication training workshops.
- In 2021, CMC was the 1st to offer a superconducting MPW service. The 2025 launch of Quantum Computing Sandbox (QCS) as part of FABrIC is a Canadian 1st.

CMC's advanced technology supply chain – over 100 alliances in 16 countries

CMC plays an important role in Canada's research and innovation advanced technology ecosystem

Collaborative organizations – e.g., ANFF (Australia), VDEC (Japan), IDEC (South Korea), TSRI (Taiwan), EUROPRACTICE consortium partners – have CMC-similar mandates.

World-wide industrial supply chain – MPW fabrication services

CMC's Multi-project wafer (MPW) supplier partnerships include:

Learn more – CMC fabrication and packaging services: www.CMC.ca/FAB

- Logos are trademarks or registered trademarks of their owners.
- GlobalFoundries and the GlobalFoundries® logo are trademarks or registered trademarks of GlobalFoundries Inc.

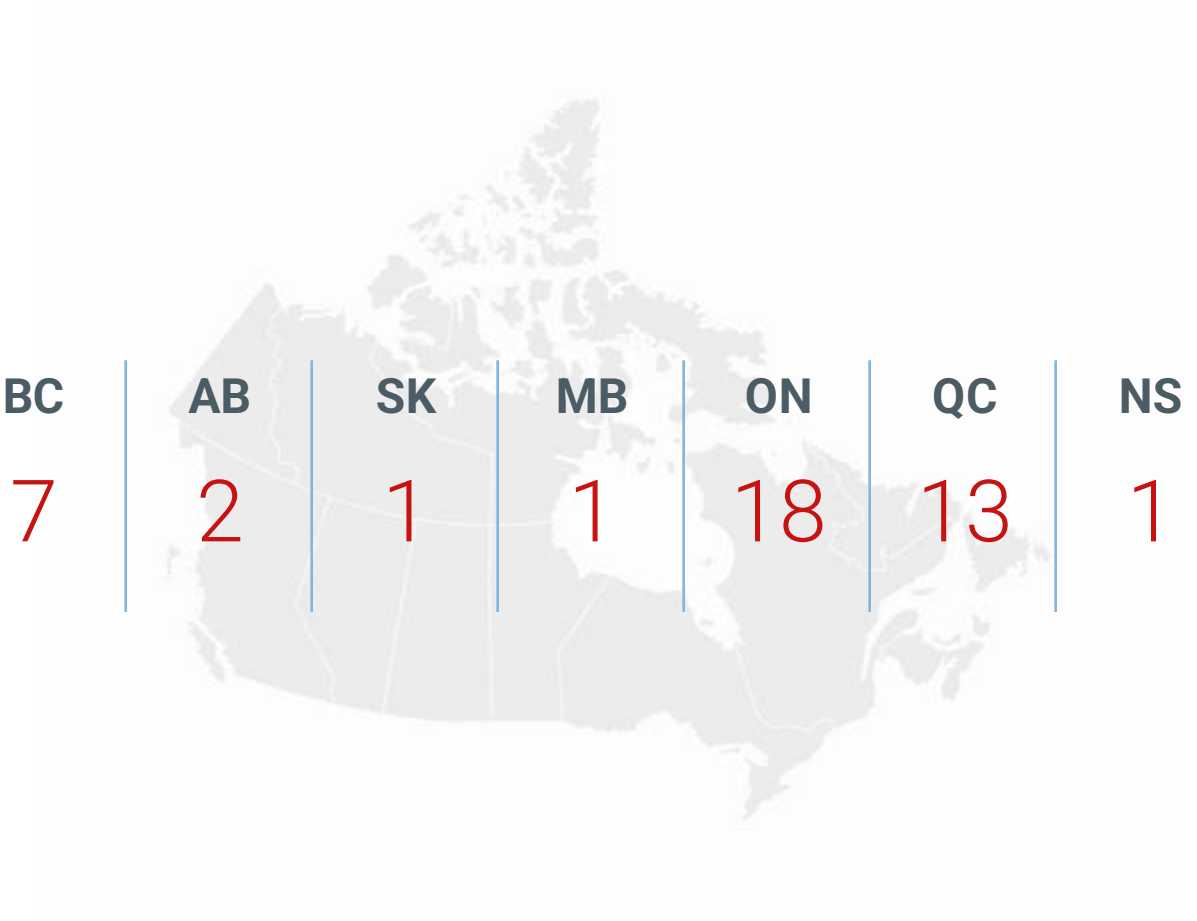
Canadian advanced technology supply chain – over 40 university-based labs

Canadian MNT Lab Locator
www.CMC.ca/canadian-MNT-labs

CMC's MicroFAB Access supports custom microfabrication at 40+ open-access micro-nanotechnology (MNT) cleanroom facilities.

MicroFAB Access
fabricinnovation.ca/MicroFAB-Access

Simplified access at reduced costs to create working prototypes: 80% (up to $4,000 max.) of eligible fab costs reimbursed.



BC	AB	SK	MB	ON	QC	NS
7	2	1	1	18	13	1

Summary
– A dynamic ecosystem enabling Canadian innovation

CMC's Subscription, R&D commercial services, and Virtual Incubator Environment (VIE) – offering start-ups a suite of state-of-the-art-tools and support – are proud contributors to strengthening Canada's semiconductor talent and innovation pipelines.

The 10-year survival rate for start-ups benefiting from CMC infrastructure is **75%**, far better than the typical rate of about 45%.

CMC's global and Canadian supply chain alliances enable simplified cost-effective access to design software, prototyping, testing, and packaging for advanced technologies like microelectronics, photonics, sensors, and quantum – accelerating commercialization in Canada's national strengths our semiconductor ecosystem.

www.CMC.ca

Let’s work together

Gordon Harling
President and CEO
harling@cmc.ca
+1.613.449.6820

www.CMC.ca

APPENDIX:
CMC Programs

www.CMC.ca/Programs

FABrIC – Powered by CMC

FABrIC

– CMC's marquee program, is a 5-year, **$217M** Strategic Response Initiative funded by the Government of Canada to accelerate the national semiconductor industry.

FABrIC Funding Calls

Challenges

– Stimulating innovation in semiconductor fabrication process and IoT devices (sensors and other products).

Quantum Computing Sandbox

– Providing technical expertise and enabling access to state-of-the-art quantum computing platforms.

Learn more: www.CMC.ca/Programs

CMC basecamp™ – design/fab/test your microchip

Hands-on training for advanced semiconductor, photonics, quantum, and packaging technologies.

CMC basecamp™ training provides a unique combination of theory and lab work in design, simulation, fabrication, testing, packaging, and system integration.

CMC basecamp offers multiple learning paths across silicon photonics, quantum photonics, superconducting circuits, CMOS for photonics, integrated circuit design, and Low-Temperature Co-fired Ceramic (LTCC) system design.

Learn more: www.CMC.ca/Programs

FABrIC | Powered by Propulsé par CMC

Funded by the Government of Canada
Financé par le gouvernement du Canada
Canada

VIE – for start-ups & SMEs

CMC's Virtual Incubator Environment (VIE) – for start-ups & SMEs

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

State-of-the-art-tools, low-cost fabrication, and testing services.

VIE offers a suite of CAD and Simulation Tools, training, webinars, documentation, and IT support from CMC staff.

Learn more: www.CMC.ca/Programs

VIE

Contact us:
sales@cmc.ca

Canadian MNT Lab Locator

Canadian Micro-Nanotechnology (MNT) Labs

Discover open-access cleanrooms, nanofabrication, microscopy and microfluidics labs across Canada. List your lab to join the national directory and reach researchers & innovators.

Search over 40 labs

List your lab

CMC is a proud member of Global Nanolab.

Learn more: www.CMC.ca/Programs and fabricinnovation.ca/MicroFAB-Access

DUET – Dual-Use and Emergency Technologies

A proposal – **CMC Microsystems' DUET initiative provides fuel for innovation in these technologies to build a stronger, more self-sufficient Canada.**

Canada will invest in emergency preparedness, defence, and strategic investments to increase domestic resilience. It underscores the strategic importance of semiconductors in enabling secure, resilient, and sovereign national capabilities.

Learn more: www.CMC.ca/Programs

DUET

Become a DUET partner
CMC.ca/DUET