

SUMMIT REPORT

CHIPS NORTH

Executive Summit 2026

May 4–5, 2026 | Ottawa, Canada

Brookstreet Hotel, Kanata North Technology Park

AI Chips | Defense & Dual Use | Optocomputing | Semiconductor Investment

Produced by Canada's Semiconductor Council
canadasemiconductorcouncil.com | chipsnorth.com

Foreword

The evening before CHIPS NORTH opened, Minister Melanie Joly sat down with CSC members and announced the spinout of the Canadian Photonics Fabrication Centre from the National Research Council. A facility that has been operating inside a government institution for decades, producing world-class compound semiconductor work and absorbing approximately \$150 million in federal investment, will now be structured to attract private capital and operate commercially.

That announcement did not come out of nowhere. It came out of years of sustained advocacy by the companies, researchers, and government officials in the CHIPS NORTH room. The summit that followed was shaped by it: session after session returned to the same underlying question, which is not whether Canada has the capability to matter in the global semiconductor industry, but how fast we can organize around the capabilities we already have.

More than 250 people made their way to Kanata on May 4 and 5. Executives, investors, and policymakers from across Canada, plus delegations from Germany, France, the UK, and the US. The conversations were frank. The technical sessions were specific. The firesides with Jim Keller and Minister Evan Solomon gave the room two very different but complementary lenses on where the industry is going and what Canada's role in it could be.

This report captures what was said. It is for the people who were there and want a record of it, and for the people who were not and need to understand what the Canadian semiconductor industry is working through right now.

Paul Slaby | Managing Director, Canada's Semiconductor Council
May 2026

Summit at a Glance

250+

Executive attendees

2

Days

4

International delegations

9

Achievement Award winners

Program

- Optocomputing
- Defense & Dual Use
- AI Chips
- Semiconductor Investment
- Fireside: Jim Keller & Tony Chan Carusone
- Fireside: Min. Evan Solomon & Keith Strier, AMD

Government Officials

- The Honourable Melanie Joly, Minister of Industry
- The Honourable Evan Solomon, Minister of AI and Digital Innovation
- The Honourable Victor Fedeli, Ontario Minister of Economic Development
- The Honourable Jenna Suds, Parliamentary Secretary to the Minister of Government Transformation, Public Works and Procurement and to the Secretary of State (Defence Procurement)
- Wendy Hadwen, ADM, Policy-Industry Department of National Defence
- Charles Vincent, ADM, Innovation, Science and Economic Development Canada

International Delegations

- Germany
- France
- United Kingdom
- United States

Sponsors

Platinum

- Qualcomm

Gold

- AMD, TSMC

Silver

- IBM, Marvell, Microchips, Teledyne MEMS

Bronze

- CEA-Leti, Emtar, NGEN, Qnity, Siemens EDA

Ecosystem

- CPFC

Supporter

- FABrIC, Fragomen, Ulkasemi, University of Ottawa

Hosting

- Invest Ottawa, Kanata North Business Association, Wesley Clover

Refreshment

- Carbon to Metal Coatings Institute

Coffee

- PWC, SPARK Microsystems

Innovation Showcase

- C2MI, Destiny Copper, Rohde & Schwarz

The Announcement

On the evening of May 4, at a private event for CSC members, Minister of Industry Melanie Joly announced that the Canadian Photonics Fabrication Centre will be spun out from the National Research Council and restructured as an independent, commercially oriented entity open to private investment.

The CPFC has been operating within the NRC since its founding. Over that period, with approximately \$150 million in federal investment, it built one of the world's few compound semiconductor foundries capable of working in indium phosphide and other III-V materials at commercial quality. What it has lacked is the flexibility to grow at the pace its clients need, take on the kind of long-term capacity commitments that industrial customers require, and attract the private capital that would allow it to scale.

Velko Tzolov, the CPFC's Director General, has described the facility's demand situation directly: clients have been asking to purchase 100% of available capacity. New equipment is being installed. The transition to co-packaged and near-package optics in AI data centers is creating a window for new entrants in the compound semiconductor supply chain that the current CPFC model cannot fully serve. The spinout changes that.

"We are moving toward scale, toward speed, and toward a more industry-driven model for one of the most strategic layers of the global technology stack."

Paul Slaby, Managing Director, Canada's Semiconductor Council

MP Jenna Suds, who has spent the past year advancing the file with the Prime Minister directly, described the objective clearly: to evolve the CPFC into a globally competitive, commercially scalable platform. The public investment that built and grew the facility will now attract private capital that enables it to grow at the pace the market demands.

She also said something that landed in the room: Canada is the only G7 country without a national semiconductor strategy. Not as a criticism, but as a statement of where the work is. The capability is here. The coordination and scale are the missing pieces. The CPFC decision is one part of building them.

01 Optocomputing: Beyond Silicon

The Physical Constraint AI Cannot Software Its Way Out Of

Chuck Mattera, founder of Avalanche Thinking and former CEO of Coherent, opened the optocomputing session with a history that the room already knew but that bears stating plainly. Bell Labs invented the transistor. Intel scaled it for 75 years. The semiconductor industry rode that curve and built the modern world on it.

That era is not over. But the limiting factor has shifted. AI training clusters today consume as much electricity as small cities. Moving data between chips and between racks at the speeds AI requires, over copper wire, is hitting physical limits of power consumption and bandwidth that transistor scaling cannot resolve. Photonic interconnects, which move data using light rather than electrons, reduce energy per bit by an order of magnitude, eliminate the latency and heat of copper, and allow multiple wavelengths to share a single fibre simultaneously. That is where the buildout is going.

"AI is no longer transistor-limited. It is power and bandwidth limited. Both of those constraints have a single answer: compound semiconductors."

Dr. Chuck Mattera, Founder and CEO, Avalanche Thinking Inc.

What the CPFC Announcement Means for the Supply Chain

Velko Tzolov walked the room through the CPFC's current position and where it is heading. The facility has expanded its physical footprint, is installing new equipment, and is positioned to quadruple capacity under the new commercial model. It operates as a pure-play fab for compound semiconductors, working in the materials that photonic interconnects require, and it serves clients from early-stage Canadian startups through to multinational supply chains in telecom, AI, aerospace, and defense.

The market context he described is straightforward. AI data centers are the demand signal. The shift from pluggable optical modules to co-packaged optics, where the photonics moves inside the package alongside the compute chip, is opening new positions in the supply chain that existing players cannot fully occupy. A Canadian-based compound semiconductor foundry that is commercially structured, with private capital and the ability to make long-term capacity commitments, is a different asset than the same facility operating inside a government research institution.

"The opportunity is large, the opportunity is here, and the opportunity is now."

Velko Tzolov, Director General, Canadian Photonics Fabrication Centre

The Geographic Argument

Joe Costello, CEO of InPho, made the case for why Canada specifically is where the global photonics supply chain should be anchored. Roughly half of the world's photonics expertise, measured by the concentration of engineers and researchers who have spent careers in this field, sits in the corridor from Montreal through Ottawa. That concentration is not an accident. It traces directly to Bell-Northern Research and Nortel, which built a generation of photonics engineers in this corridor and then, when those companies restructured, left that talent in place.

The talent stayed. The expertise in photonics, compound semiconductors, and optical systems did not move to Silicon Valley or Seoul. It is here, in a cluster that is now directly relevant to the most capital-intensive buildout the technology industry has ever undertaken. InPho operates in Canada because of that talent density and because of the CPFC as a fabrication anchor. Costello also noted that Canada is among the world's leading producers of indium, the critical material for indium phosphide photonic chips, which means the potential for a fully domestic supply chain in this segment, from raw materials through fabrication and integration, is not theoretical.

"The entire supply chain can be here in Canada. I fundamentally believe that Canada can become the global centre of photonics for computing."

Joe Costello, CEO, InPho

Alexey Kovsh of Alfalume Inc. added a technology development that reinforces the supply chain picture: quantum dot lasers on gallium arsenide are reaching production reliability, with no sudden failures observed in more than two years of testing. This opens a more manufacturable, lower-cost path into integrated photonics than existing indium phosphide bonding approaches, and the CPFC has been involved as a fabrication partner in bringing it toward market.

02 Defense & Dual Use

What Changes When the Defense Budget Doubles

Canada's defense budget is moving from \$30 billion to \$80 billion per year over five years. The Defense Industrial Strategy, published in February 2026, identified ten sovereign capability areas and oriented procurement, capital instruments, and federal programs toward a demand signal that has not existed in this country for a generation.

Duncan Stewart of BDC framed the historical dimension. When he was in graduate school in Silicon Valley, the US Army paid for his education. When he worked at Hewlett-Packard, half the advanced research lab budget came from DARPA. The connection between sustained defense investment and the growth of a deep tech industrial base is not a theory. It is how Intel, Qualcomm, and the modern US semiconductor industry were built. Canada made a different choice for 30 years. That choice is changing.

"The connection between defense funding and high-tech growth is obvious to everyone in the world, it seems, except for Canadians. Finally, for the first time in 50 years, we are choosing to fund defense again."

Duncan Stewart, Partner, BDC Deep Tech Venture Fund

A Specific Supply Chain Problem

Joe Armstrong of 49 North and MDA Space gave the room a concrete version of what the defense demand signal means for Canadian semiconductor companies. Canadian defense and space systems cannot use Chinese or Taiwanese fabs. The options are the United States and Europe. For radiation-hardened, security-validated components, the dependency on foreign manufacturing is simultaneously a procurement constraint and a security risk.

The CPFC spinout came up in this context directly: a Canadian-based foundry for compound semiconductors that can serve defense applications without the access and classification constraints of foreign supply chains addresses a real gap in the defense industrial base, not a theoretical one. Ranovus's \$50 million contract with the US Department of Defense, for technology developed in Ottawa, was cited as evidence that companies at this level of capability are already operating in Canada.

"The concept of defense, technology, and economy being separate conversations is gone. It is absolutely one conversation now."

Sonya Shorey, President and CEO, Invest Ottawa

The Discovery Problem

Rafal Janik, Chief Operating Officer of Xanadu, described a problem the panel identified as structural: there is a significant communication gap between what Canadian companies have built and what the Canadian Armed Forces needs. Xanadu has six active defense projects. None of them are Canadian. Not because Canadian technology is inadequate, but because the discovery process that matches a defense requirement to a domestic capability does not work reliably.

The specific example he gave was clarifying. Xanadu's stabilized fibre delay lines, developed for a different application entirely, are functionally identical to the ultra-high-precision hydrophones required for undersea sensor networks. That match was discovered through a direct conversation that almost did not happen. How many similar matches are not being made?

Wendy Hadwen, ADM Policy-Industry at the Department of National Defence, described the strategy as deliberately addressing this. The demand signal is now public across 31 capability areas. DND is committing to engage differently with industry, with provinces, and with municipalities. The strategy is framed as a start line, not a finish line, which is an honest assessment of how much work remains.

"We are sitting in pole position in a number of areas. We have the engineers and the athletes. Together we run the course and win."

Wendy Hadwen, ADM Policy-Industry, Department of National Defence

03 AI Chips & Sovereign Compute

The Scale of the Market, Specifically

Erik Hadland of the Semiconductor Industry Association (SIA) in Washington, opened with numbers that reframed the scope of the opportunity. AI data center semiconductor revenue this year: \$670 billion. The \$1 trillion mark, previously forecast for 2030, is now projected to arrive in 2026. Semiconductors account for more than 50% of AI data center capital expenditure. A leading-edge server rack contains more than 4,500 chips across 20 different types.

The 4,500 chips figure is the one that matters most for Canada. The AI hardware conversation in public tends to focus almost entirely on GPUs. The actual procurement reality is logic, memory, power management, analog mixed signal, photonic interconnect, packaging, and networking silicon, all of it sourced from dozens of suppliers, all of it required for every rack that goes into every data center being built right now. Canadian companies are active, or capable of being active, in several of those segments.

"Semiconductors account for about 95% of the leading AI server rack's value content. If we are serious about supporting AI leadership, we need to be mindful of the entire chip stack."

Erik Hadland, Director of Technology Policy, Semiconductor Industry Association

What Canada Has and What It Has Not Yet Done With It

The panel was direct on both sides of this. Canada produced the foundational research on deep learning. It had a national AI strategy before almost anyone else. Ontario retains more than 90% of its AI master's graduates. AMD has over 3,000 engineers in Canada. Qualcomm has over 1,000. Tenstorrent's Blackhole processor, designed in Toronto, is described by Jim Keller as the world's fastest AI inference computer for large language model workloads.

Niraj Mathur of Blumind said plainly what the panel was circling: count the Canadian AI multi-unicorns on less than one hand. The research capability is not the problem. The scale-up infrastructure, the capital availability for hardware companies at Series B and beyond, and the domestic demand signal that gives investors confidence to back Canadian companies through to global commercialization, these are the gaps. They are known gaps. The question is how fast the ecosystem closes them.

"We have phenomenal DNA and expertise. But from all the good that is coming out of here, how many multi-unicorns have we created that are true AI companies in Canada? Very few."

Niraj Mathur, Co-founder and CEO, Blumind

On Sovereign AI, Practically

Andrej Zdravkovic, SVP at AMD, made an argument about sovereign AI that cut through a lot of the abstraction. The practical question is not the national origin of every chip in the stack. It is whether Canadian data is governed under Canadian law, and whether the people operating the infrastructure that processes it are accountable to Canadian institutions. Hardware capability is one component of that. The governance layer, the contractual structure, the data residency, and the operational control sit on top of it.

Edge AI came up as a specific near-term opportunity where Canadian companies can compete without waiting for a policy framework. General-purpose large language models are overbuilt for the vast majority of real-world workloads. Robotics, smart manufacturing, precision agriculture, health monitoring, industrial IoT: these applications require on-device processing at low power, low latency, and with strong privacy guarantees that cloud architectures do not provide. The hardware to serve that market is converging now.

"Canada absolutely excels in research and innovation. We have not managed to put that into practice as meaningfully. We need to make that transition."

Andrej Zdravkovic, SVP and Chief Software Officer, AMD

From Ground to Chip

Run in partnership with the Ottawa Tech Investment Summit, the Investment session brought together leading investors and industry voices, including Patrick Rundell (Senior Venture Investor, AMD), Claude Vachet (Managing Partner, Cycle Capital), Daniel Yum (Principal, Playground VC), and Tony Chan Carusone (Tech Executive, Qualcomm), for a discussion moderated by Paul Slaby, Managing Director of Canada's Semiconductor Council. The conversation explored how venture capital and corporate investment are shaping Canada's semiconductor ecosystem through concrete partnerships and scaling opportunities, rather than abstract potential.

CPFC presented the fabrication reality: 11,000 square feet of cleanroom in Ottawa, the only compound semiconductor foundry of its kind in Canada, with new equipment being installed and capacity set to quadruple under the new commercial model. Ranovus presented the commercial application: co-packaged optics that replace copper interconnect in AI data centers, with customers including Nvidia, AMD, and Apple, and a \$100 million commitment to scale optical semiconductor manufacturing in Ontario, creating 125 high-value engineering jobs in Ottawa.

Why Semiconductor Investment Is Structurally Different

The panel worked through the specific ways that hardware investment differs from software in ways that matter for both founders and the policy frameworks designed to support them. A single advanced chip tape-out costs \$10 to \$50 million. Design cycles run 18 to 24 months. A failed design is a complete loss, with no equivalent to the software pivot or the minimum viable product. The talent required, PhD-level expertise in lithography, materials science, and EDA tools, is in a global bidding war with US and Asian competitors who can pay more.

Against that backdrop, the panel identified what actually makes a Canadian semiconductor company investable at this stage: a system-level value proposition rather than a component pitch (a 40% reduction in data center cooling costs, not a faster modulator), a joint development agreement with a tier-one customer that removes market risk, and a commercialization path that generates IP licensing revenue before the full chip is manufactured. These are the signals that move a hardware deal through an investment committee that was built to evaluate software.

Policy Instruments Active in 2026

SR&ED modernization now covers capital assets, including lab equipment, cleanroom tools, and testing rigs, for the first time in years. For hardware companies whose largest costs are physical infrastructure rather than salaries, this changes the investment calculus meaningfully. The Defense Industrial Strategy includes capitalization instruments for scaling manufacturing within defense supply chains. The Strategic Innovation Fund is prioritizing the connection between Canada's critical mineral base and downstream semiconductor manufacturing.

The panel addressed the domestic-versus-multinational tension that runs through most discussions of Canadian industrial policy. The frame that emerged: the question is not who owns the cap table or where the parent company is incorporated. It is whether the R&D, the engineering talent, and the manufacturing capability are operating in Canada and accountable to the Canadian industrial base. A Canadian engineer designing advanced AI chips at AMD Markham is contributing to Canada's semiconductor capability in a way that matters, regardless of where AMD's headquarters is located. Policy frameworks that reward that rootedness, rather than penalizing companies for their corporate structure, are the ones that will actually build the ecosystem. Closely tied to this is the question of IP creation and control. Where intellectual property is generated in Canada with the support of Canadian taxpayer funding, Canada needs to maintain some level of control over that IP, so the long-term value created here is not captured entirely offshore.

05

Fireside: Jim Keller

On Tenstorrent and What It Means That the World's Fastest AI Is Canadian

Jim Keller, CEO of Tenstorrent, joined Tony Chan Carusone, Technical Executive at Qualcomm, for a conversation that covered more ground in 45 minutes than most conferences manage in a full day. Keller opened with a statement about the room: Tenstorrent's Blackhole processor, designed by a core team in Toronto, is the world's fastest AI inference computer for large language model workloads, handling both prefill and decode on a single chip. Canada, he said, has the world's fastest AI. The room should know that.

What made it possible, he said, is straightforward: the University of Toronto and the broader Ontario engineering ecosystem produce hardware engineers at a quality and scale that justifies building core product in Canada rather than moving the team to California. That is not a loyalty argument. It is a talent argument. The engineers are here and they are good.

He was equally direct about what is not working. A statistic from Queen's University came up during the conversation: 93% of interns leave Canada after graduation. Keller's response was characteristic: that is a specific problem, it has a specific set of causes, and treating it as though it is somehow inevitable or structural is exactly the wrong approach. Identify the reasons. Address them. Measure whether it changes.

"My goal is to use AI to hire a million people. I want more employment, not less. If your goal is to save costs, you are going to make your company smaller."

Jim Keller, CEO, Tenstorrent

On AI and What It Actually Does to How People Work

Keller's framing on AI and employment was the most quotable of the day, and also the most grounded. Companies that use AI to cut headcount will shrink. Companies that use AI to do more will grow. His own HR team used an AI agent to cut their administrative processing time in half and spent what they recovered doing the work they actually wanted to do. That is the template.

On engineering education, he used an analogy that stuck with the room. You do not become a great basketball player by only playing basketball. You do drills. You develop the underlying physical capacities, the strength, the footwork, the reflexes, that make you capable of performing under pressure. Using AI to skip the hard problems in engineering is the equivalent of only playing games and never doing drills. The engineers who are going to build something genuinely new are the ones who have worked through problems they did not initially know how to solve.

"You have to face problems you don't know how to solve and try and learn and grow. You don't become a great basketball player by only playing basketball."

Jim Keller, CEO, Tenstorrent

06

Special Address: Minister Fedeli

The Honourable Victor Fedeli, Ontario's Minister of Economic Development, Job Creation and Trade, addressed the room just before the lunch break with a direct investment case for the Canadian semiconductor corridor. His remarks were aimed at the international delegations in the room, putting the Ottawa–Toronto–Waterloo cluster in concrete economic terms and framing Canada as a stable, rule-of-law destination for supply chain investment in a period of significant global disruption.

For the delegations who had traveled from Europe and the US, he offered a set of numbers. Ontario's semiconductor sector generates over \$10 billion in annual economic activity, with \$1.1 billion in semiconductor and electronics exports. As a sub-national economy, Ontario ranks third among all US trading partners at \$500 billion annually, after Mexico and China, and is the largest customer to 15 US states and second-largest to 12 more. Global companies including Qualcomm, Intel, AMD, Tenstorrent, and Ranovus have built operations within the corridor, and TSMC's design center in Ottawa reflects the world's leading semiconductor manufacturer's confidence in the cluster's depth.

On talent, the momentum is real. Ontario graduated 87,000 STEM students last year, rising to 94,000 this year, with AI master's enrolment growing from 1,100 to 1,700 over two years. Geoffrey Hinton's Nobel Prize traces to University of Toronto research, and the Vector Institute built on that foundation has made Canada's AI talent cluster one of the most concentrated in the world. A \$750 million commitment to expand STEM seats by 20,500 annually is the supply-side investment behind those numbers.

The investment case he described has accelerated. In eight years, Ontario has attracted \$222 billion in new investment, \$40 billion of it in technology. Last year alone, 750 companies entered, committed \$35 billion, and hired 64,000 people. A significant portion came from US companies looking for stable Canadian alternatives. Fedeli described the pattern from 30 international trade missions as consistent: companies navigating a fragmented global supply chain see Canada's combination of stability, rule of law, and deep US trade integration as a differentiated asset. The CPFC spinout announced the previous evening, he said, reinforced that signal directly.

He closed with a direct ask to the companies in the room. The corridor's capabilities across semiconductor design, photonics, AI, quantum, and advanced manufacturing are positioned to compete for capital that is actively seeking trusted alternatives to disrupted supply chains. The question, as he framed it, is how quickly Canada converts existing strengths into new partnerships, new technologies, and new jobs.

07

Fireside: Minister Evan Solomon**What the Government of Canada Is Actually Working On**

The closing session brought Minister of Artificial Intelligence and Digital Innovation Evan Solomon into conversation with Keith Strier, SVP Global AI Markets at AMD, moderated by Kirk Ouellette of STMicroelectronics. It was the session the room had been waiting for, and the Minister arrived with specifics rather than talking points.

His core argument: semiconductors have moved from being an industrial file to being simultaneously an economic file, a security file, a sovereignty file, and a growth file. Every conversation about AI models, agents, and the automation of knowledge work sits on a physical stack: chips, compute infrastructure, power, talent, and data. Canada's AI strategy is being built around that physical layer, not around the software layer that runs on top of it.

"Semiconductors are no longer just an industrial file. They are an economic file. They are a security file. They are a sovereignty file. And they are a growth file."

The Honourable Evan Solomon, Minister of Artificial Intelligence and Digital Innovation

On Strategy and What Is Already Moving

The Minister was asked directly about the AI strategy timeline and gave a direct answer: it is coming soon. But the more substantive part of his response was the list of things that are not waiting for it. RFPs are out for major data center projects. A public AI supercomputer program is underway. A public AI access program for SMEs has launched. The CPFC spinout, announced the previous evening, is one of the most concrete expressions of what the strategy will formalize: focus on the areas where Canada already has genuine capability, and build the commercial infrastructure to scale them.

The areas he named specifically: photonics, quantum, AI chip design, packaging, high-performance computing. On the CPFC specifically, he described it as the only fully end-to-end photonics fab and compound semiconductor facility in North America, which, now that it is being structured for commercial scale, represents a strategic asset that the country has not previously been able to fully leverage.

"Sovereignty does not mean solitude. It is building with partners who share our values. Our approach is to build capacity at home while deepening trusted partnerships abroad."

The Honourable Evan Solomon, Minister of Artificial Intelligence and Digital Innovation

Keith Strier on What AMD Is Seeing

Keith Strier described what he called the third phase of sovereign AI. The first phase was governments recognizing the problem and building policy frameworks. The second was the investment surge that followed recognition. The third, which is the current phase, is resiliency: building infrastructure that can actually withstand disruption, which requires heterogeneous systems, multiple trusted computing partners, open architectures, and the kind of strategic interdependence between allied nations that does not create new single points of failure in exchange for resolving old ones.

AMD's position on this, which Strier described as a business conviction and not a marketing position, is open architecture: AI factories that customers configure for their own requirements, systems designed to interoperate rather than lock in. His formulation was the clearest statement of the session: the goal is not to lock customers into AMD's technology but to unlock what customers can do with it.

"We are not here to lock you into our technology. We are here to unlock your potential using our technology."

Keith Strier, SVP Global AI Markets, AMD

08 CSC Working Groups

While the main stage program worked through the macro picture, CHIPS NORTH brought CSC members together for a parallel track of Working Group sessions on the afternoon of May 4. Five groups met across four sessions: the Manufacturing Working Group, Talent Working Group, AI Chips Working Group, and Automotive Working Group, along with the announcement of an upcoming Defence and Dual Use Working Group. A noon reception drew manufacturers from across Canada's semiconductor ecosystem, from Montreal and Bromont to Edmonton and Vancouver, before the formal sessions began.

Manufacturing: Talent, Supply Chain, and the Path to Scale

The Manufacturing Working Group launched with co-chairs Steve Bonham of Teledyne in Edmonton and Jeff Downey of Qnity in Kingston. The opening session identified four areas where the manufacturing sector needs coordinated support: talent, supply chain, productivity and automation, and scaling from prototype to high-volume production.

On talent, the group's focus is technicians and operators. Existing programs are underused: Mitacs programming is available across Canada, Skills Council Canada funding could train 150 skilled trades workers locally in Ottawa and Ontario, and CMC FABrIC's technician training program with the Northern Alberta Institute of Technology has the architecture to scale nationally. The near-term work is to survey member needs against these resources and identify where the gaps remain.

Supply chain exposure was identified as a procurement risk, and building awareness of Canadian suppliers is unfinished work. A directory for Ontario manufacturers has been published; Quebec and Western Canada directories are in progress. Trade missions and the development of regional semiconductor manufacturing corridors were identified as complementary instruments.

For companies scaling from prototype to production, shared labs including UofT Nanofab, UofA Nanofab, and C2MI are critical infrastructure. The group made the case for continued federal investment in these facilities and for resources targeted at the specific challenges SMEs face in moving from early-stage to high-volume manufacturing. Canada's strengths in materials and processes, amplifiable through NGEN, give the sector a productivity foundation to build from.

Talent: Permanent Residency, Training, and an Applied Masters Program Ready to Scale

The Talent Working Group, co-chaired by Aaron Genest of Siemens EDA in Saskatchewan and Michael Venditti of Cadence in Montreal, brought more industry voices into the conversation this year. The themes that emerged are ones CSC has been tracking. Their persistence is itself a data point.

Permanent residency remains a blocking issue for companies trying to retain talent they have already recruited and trained. The dependencies appear to be partly provincial, which means the solution does not look the same across Canada. Training resources for technicians and operators through CMC FABrIC, Skills Council Canada, and ICTC were presented alongside applied engineering programs at the University of Saskatchewan and the Montreal cluster at UQAM, McGill, and Concordia.

The most concrete development was a case study from the University of Toronto and AMD on applied master's-industry internships. The program is designed to scale through TICAN, and the \$30 million in funding announced the week before CHIPS NORTH creates a direct mechanism to channel investment into semiconductor-relevant placements. This is a program with infrastructure, a funding mechanism, and industry alignment. The near-term work is to use it.

AI Chips: Three Subcommittees, One Mandate

The AI Chips Working Group opened under new leadership with Niraj Mathur, CEO of Blumind, taking the chair. His framing was direct: this is Canada's moment to lead in AI chips, not to participate. The group's mandate is to define and lead Canada's role in AI compute by championing next-generation semiconductor architectures, building a globally competitive ecosystem from research through commercialization, and enabling ultra-efficient intelligence at edge and cloud scale.

Three subcommittees were proposed. The first is focused on next-generation compute leadership, prioritizing energy efficiency per inference as a national differentiator and positioning Canada in physical and edge AI, where architectural constraints create competitive opportunity. The second addresses scalable commercialization and supply chain readiness, with a focus on closing the gap between Canadian research breakthroughs and market-ready silicon. The third is ecosystem alignment: engaging ISED, responding to investment consultations, and building coordination between talent, capital, and industry.

Each subcommittee is targeting draft thought leadership by fall 2026, with white papers directed to policymakers in 2027.

Automotive: Qualification Costs, Ecosystem Gaps, and the GR Work Ahead

The Automotive Working Group welcomed a new chair in Jonathan Dooley of eLeapPower, whose company builds Canadian traction inverters for electric vehicles, following the conclusion of Kirk Ouellette of ST Micro's leadership term. The roundtable surfaced several priorities.

Canada's automotive semiconductor ecosystem has gaps between university research, SME capabilities, and what industry needs for applied R&D. Targeted partnerships across those three groups were identified as a way to fill them. Mapping the automotive supply chain for Canadian companies is a parallel priority; visibility is something the working group can generate.

Electric Vehicle Innovation Ontario (EVIO), a University of Toronto-led network funded through FedDev Ontario, connects post-graduate researchers with EV and semiconductor industry partners across eight Canadian universities. With a new funding call opening in 2026 and a mandate that explicitly includes semiconductors, EVIO represents an existing mechanism for building the kind of university-industry R&D collaboration the Automotive Working Group identified as a priority.

Qualification costs were raised as a specific barrier by several companies. OCI funding has helped some technologies in Ontario navigate this; SR&ED credits were noted as a potential resource, since qualification is fundamentally R&D work, though their applicability varies by company structure. Government relations work is needed to make the case at the provincial level that semiconductor packaging is directly relevant to the automotive industry.

Defence and Dual Use: Coming

CHIPS NORTH also included the announcement of a forthcoming Defence and Dual Use Working Group. It will convene as the defense budget expansion and the Defence Industrial Strategy's demand signal across 31 capability areas begin to translate into specific procurement requirements that Canadian semiconductor companies can serve.

09 International Ecosystem

Who Came and Why It Matters

Delegations from Germany, France, the United Kingdom, and the United States were present across sessions and in bilateral meetings throughout both days. Their presence reflects something specific about the current moment: the global semiconductor supply chain is being restructured around trusted partnerships, and allies are actively mapping their relationships. Canada's combination of stable institutions, a deep photonics cluster, strong AI research, and a track record of operating reliably as a partner in complex industrial programs makes it a destination for those conversations in a way it was not five years ago.

Charles Sturman of TechWorks UK gave a brief ecosystem overview that situated the bilateral opportunity clearly. The UK generates close to 20 billion pounds annually in semiconductor revenue, roughly 3% of global output, with particular strength in processor IP, analog mixed signal, power electronics, and photonics. Companies including ARM and IQE anchor the ecosystem. Sturman extended a direct invitation to CSC's community to attend TechWorks' 30th anniversary event in London in August, where delegations from Japan, the Netherlands, and Germany are expected to participate.

"Sovereign AI should not lead to solitude. It should be about strategic interdependence across allies who work together for a shared future."

Keith Strier, SVP Global AI Markets, AMD

Minister Solomon named two specific partnerships that reflect the direction Canada is moving: the Sovereign Technology Alliance with Germany, structured around complementary strengths rather than dependency, and the Cohere-Alfalfa deal between Canadian and European companies as an early example of what bilateral semiconductor and AI collaboration can look like in practice. The pattern in both cases is finding where Canadian and allied capabilities are genuinely complementary, and building commercial and research relationships around those intersections.

10 Semiconductor Achievement Awards

Nine awards across seven categories, presented at the dinner on the evening of May 5. The awards recognize the companies, executives, and ecosystem builders whose work is advancing Canada's semiconductor industry.

Category	Winner	Recognition
Technological Innovation	Synopsys Canada	Led a global interconnect IP portfolio exceeding \$200M and delivered industry-first 112G to 448G interconnect technologies now deployed in over 100 customer SoC programs worldwide.

Product Innovation	Spark Microsystems	Short-range wireless transceiver combining high throughput, ultra-low latency, and ultra-low power consumption in a single device for UWB, audio, gaming, and industrial IoT applications.
Product Innovation	Lumotive Technologies	World's first programmable optical semiconductor. Light Control Metasurface technology that reduces LiDAR design cycles from 18 months to three to six months.
Startup of the Year	Emtar Technologies	Highly integrated RF SoC that combines up to 90% of satellite user terminal functionality into a single chip for next-generation LEO satellite networks.
Startup of the Year	Neuron IP	Self-funded and revenue-generating chiplet interconnect and power delivery technology addressing interconnect and power delivery bottlenecks in AI and HPC data center infrastructure.
Executive of the Year	Velko Tzolov, CPFC	Director General of the CPFC since its founding. Led the facility's sustained expansion over nearly a decade and its transition toward private sector commercialization.
Company of the Year	Ranovus	Co-packaged optics for AI data centers. Committed over \$100 million to scale optical semiconductor manufacturing in Ontario, creating 125 high-value engineering jobs in Ottawa.
Ecosystem Builder	Melissa Chee	Founding CEO of the Hardware Catalyst Initiative, Canada's first dedicated lab and incubator for semiconductor hardware startups, champion of advancement of women in STEM.
Lifetime Achievement	Sylvain Charbonneau	Founding architect of the CPFC and the person most responsible for establishing Canada's compound semiconductor fabrication capability at the NRC. President, Canadian Foundation for Innovation.
Lifetime Achievement	Dr. Andre Salama	Co-founder of CMC Microsystems. Pioneer of power semiconductor research. Trained over 500 highly qualified personnel through Micronet, connecting 20+ universities with 50 industry partners across Canada.

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What Comes Next

The CPFC needs a governance structure, a private capital partner, and a commercial scale-up plan. The Defense Industrial Strategy's demand signal across 31 capability areas needs to be connected to the Canadian companies that can serve it, most of whom do not currently have a relationship with DND procurement. The AI strategy is coming, and the semiconductor components of it will matter significantly for how capital and talent flow over the next five years.

Near-Term

- CPFC governance structure, capital partners, and scale-up plan
- Defense procurement: connecting DND demand signals to Canadian semiconductor capabilities
- AI strategy publication and the semiconductor components within it
- Talent retention: understanding and addressing why 93% of engineering graduates leave
- Bilateral partnerships: Germany, France, UK, South Korea, Japan, Spain

Open Questions

- How does Canada build sovereign compute capacity without closing off access to the global tools its researchers need?
- What is the right policy bridge between domestic startups and multinational R&D operations in Canada?
- How does the CPFC's commercial model serve both early-stage SME innovation and large-scale production commitments simultaneously?
- Where is the institutional infrastructure for Canadian semiconductor companies between Series A and global commercialization?

Canada has a fabrication anchor, a defense demand signal, a photonics talent cluster that has no parallel outside of this corridor, and a policy environment that is, for the first time in a long time, moving in the right direction at speed. The work ahead is not about proving the case. It is about executing against it.

Canada's Semiconductor Council

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