FABrIC

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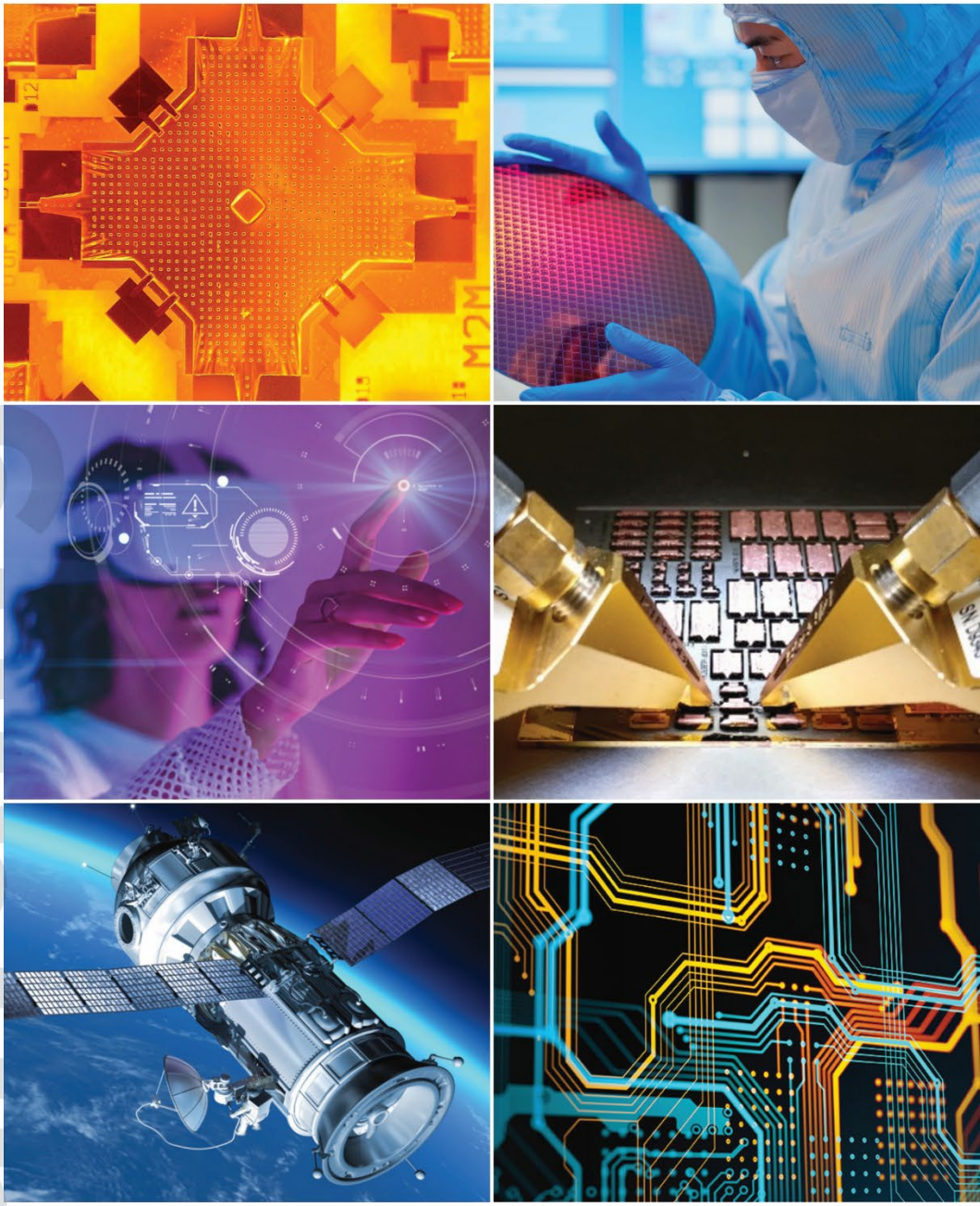
Challenge Guide



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Fabrication Process Development and IoT Product Development

August 10, 2026

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Canada’s Semiconductor Ecosystem. Accelerated.

FABrIC: A generational investment by the Government of Canada

FABrIC is a Strategic Response Fund initiative of the Government of Canada to expedite domestic capabilities in advanced semiconductor design and manufacturing. Managed by CMC Microsystems, FABrIC galvanizes national strengths in compound semiconductors, microelectromechanical systems (MEMS), photonics, and quantum technologies, accelerating commercialization and amplifying Canada's competitive advantages by maximizing the economic impact of its semiconductor sector.

Marquee programs include Challenge funding, the Quantum Computing Sandbox and Training. Challenge funding supports the development of fabrication processes and IoT products that build national capacity. The Quantum Computing Sandbox is Canada’s first program to enable access to state-of-the-art quantum computing platforms. The FABrIC training portfolio provides specialized skills development for graduate students, early and mid-career professionals in the highly technical and demanding processes of the semiconductor sector.

It also connects the semiconductor sector into Canada’s major industries. As change transforms global trading relationships, forging these connections is integral to the semiconductor sector, to the ability of these critical Canadian industries to innovate and compete – and to bolstering national sovereignty.

CMC Microsystems

Founded in 1983, CMC Microsystems (CMC) has been instrumental to the success of Canada’s semiconductor industry. Over the decades, its highly regarded training programs have honed the skills of tens of thousands of semiconductor professionals. From quantum software and hardware to passive silicon photonics, it has fortified the pipeline of highly qualified personnel (HQP) that are the bedrock of market success.

It has established cost-effective access to sophisticated tools and technologies essential for academic research, R&D, and emerging companies. During the era of globalization and subsequent fab and foundry consolidation, it negotiated critical manufacturing agreements that enabled emerging Canadian companies to prototype and test their products. The domestic industry would have been severely compromised without CMC’s efforts. CMC Microsystems is a not-for-profit organization.

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Acknowledgements

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Challenge Guide

Fabrication Process Development and IoT Product Development

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To download a copy of this publication in French: fabricinnovation.ca/fr
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1. Introduction

FABrIC is a five-year, $217M project to help secure Canada's future in semiconductors.

Challenges grant targeted funding for both Fabrication Process and IoT Product Development.

Fabrication Process Development Challenges focus on building new or improving existing process capabilities with compound semiconductors, MEMS, photonics, and quantum/superconducting technologies. The IoT Product Development stream supports the development and commercialization of new, advanced sensors and other semiconductor chips that target IoT products and solutions.

Semiconductors power high-performance economies and enable growth. Estimated to grow to over US$1 trillion by 2030, significant changes in the global semiconductor landscape over the past few years have been driven by supply chain disruptions, technological progress and geopolitical shifts. Governments around the world have made unprecedented investments to bolster their semiconductor industries, onshore manufacturing and stimulate research and product development in strategic technologies. Canada has a generational opportunity to bolster its position in the global semiconductor market and benefit from its growth.

To compete, Canada is making strategic investments that accelerate the development and commercialization of technologies and products where there is significant domestic capability and global opportunities.

2. FABrIC's Strategic Objectives

Ecosystem and Collaboration

Create a vibrant and sustainable ecosystem that provides networking, training, and collaboration opportunities which enable Canadian industry, NFP's, academics and researchers to work together to advance and accelerate semiconductor product commercialization and the development of semiconductor technology and related intellectual property (IP) for the benefit of Canada.

Accelerate Quantum Applications

Accelerate the development of quantum-ready companies and quantum computing applications in Canada by providing access and technical assistance to small/medium sized enterprises (SMEs) and academics for quantum-based hardware and software development and prototyping.

New Advanced Sensor and Semiconductor Chips

Foster the growth and expansion of companies developing and commercializing advanced sensors and other semiconductor chips and services in Canada targeted at the rapidly growing and strategically important IoT market with direct applications in clean tech, electrified vehicles, 5/6G data communications, healthcare, agriculture, biotech, mining and other strategically important sectors in Canada.

Fabrication Supply Chain Capacity and Capability

Develop widely accessible semiconductor fabrication capacity and capability in Canada to strengthen and deepen Canada's supply chain for the design, prototyping, fabrication, assembly, and test of new advanced sensors and other made-in-Canada semiconductor products addressing the Internet of Things (IoT) market. Key areas of focus are photonics, microelectromechanical systems (MEMS), compound semiconductors, **quantum technologies, such as superconducting technologies,** and related advanced packaging and test technologies.

Secure Pipeline Of HQP

Create and train a sustainable pipeline of highly qualified personnel (HQP) with critical skills required for product development and manufacturing roles in Canadian semiconductor companies.

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Canadian Intellectual Property

Create Canadian intellectual property (IP) and commercialize this IP for the benefit of Canada.

Sustainable Innovation Platform

Provide a sustainable FABrIC Innovation Platform for Canadian academics, researchers, and SMEs which provides them affordable, timely access to state-of-the-art semiconductor design tools (CAD), fabrication and assembly technologies (including access to global supply chains), test and characterization tools, and technical expertise in product development and manufacturing needed to train HQP and to advance novel product and device development projects.

Enhance National Security and Resilience

Enhance national security and resilience in the supply of critical semiconductor products and technologies by strengthening supply chains with trusted Canadian partners and increasing the pool of highly trained specialists in semiconductor product design and fabrication technologies.

International Collaboration

Promote international collaboration and partnerships to attract international investment and HQP to Canada and to exchange knowledge and best practices related to semiconductor fabrication, product development, and supply chain.

3. FABrIC Challenge Themes

Call to Industry and Academics* in Canada

FABrIC Challenges are calls to Canadian industry and academics in the semiconductor sector.

Two complementary Challenge tracks

FABrIC operates Challenges in two complementary tracks: Fabrication Process Development and IoT Product Development. Both tracks share a common eligibility framework, selection process, and overall objectives described in this guide. They differ with respect to what is being developed, funding parameters, and certain technical thresholds, as follows:

Fabrication Process Development	IoT Product Development
Supports projects that enable and stimulate novel Fabrication Process Development initiatives from Canadian industry and academics, while leveraging and enhancing the prototyping and manufacturing capacity of domestic fabrication facilities.	Supports the design, development, and commercialization in Canada of novel advanced sensors and other semiconductors chips targeted at the IoT market.

Fabrication Process Development Challenge Themes

Canadian research institutes and manufacturing facilities possess world-class fabrication capabilities that expand key foundational semiconductor areas such as compound semiconductors, MEMS, photonics, and quantum/superconducting technologies – serving global markets. These capabilities include advanced process

* Canadian Education/Research Institute

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technologies using materials such as GaN, InP, and SiN, as well as laser-based and other emerging device platforms.

FABrIC offers funding and support services to empower Canadian SMEs develop and build fabrication processes using Canadian-based fabrication facilities. These facilities are then better equipped to serve global markets.

Fabrication process development proposals must be focused on one or more of the following strategic areas:

- Compound semiconductors & power semiconductors technologies (SiC/GaN/Ge)
- Low-loss materials & processes
- Microelectromechanical systems (MEMS)
- Photonics packaging (co-packaging/fibre connections/on-die/packaging) and PDK/ADK
- Quantum processing (noise reduction/ error reduction/ KGD) / computing, connectivity
- Research institute commercial prototyping capability (GaN, InP, SiN, others)
- Silicon Photonics-related processes
- Superconducting devices

IoT Product Development Challenge Themes

Semiconductors are key enablers of the modern economy. Recent issues have highlighted that semiconductors and their supply chain are critical for many strategic industries.

FABrIC-funded IoT Product Development projects must include the design and development in Canada of novel advanced sensors and other semiconductor chips targeted at the IoT market, with a clear path to commercialization.

Products should have applications in one or more of the following strategic areas:

- Advanced Manufacturing
- Aerospace
- Agri-tech / Agri-food
- Biotech
- Clean Tech / Energy and Energy management technologies
- Defence (Safety, Security) / Dual-Use Technologies
- Digital Technologies (AI, 5/6G data com, etc.)
- Edge-AI, including edge computing, edge sensors and AI connectivity
- Electrified Vehicles / Mobility and Transportation technologies
- Healthcare
- Mining & Natural Resources
- Ocean Marine

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4. At a Glance: Fabrication *vs* IoT Product Development

Key differences between the two Challenge tracks

Dimension	Fabrication Process Development	IoT Product Development
What is being developed	Semiconductor fabrication processes, capacity, and capabilities developed through Canadian-based fabrication facilities.	Novel advanced sensors and semiconductor chips designed, developed, and commercialised in Canada for the IoT market.
Challenge focus	Must align with one or more Fabrication Process Development theme areas described in Section 3.	Must target one or more strategic IoT application areas described in Section 3.
Reimbursement rate	40% of eligible project expenses	37% of eligible project expenses.
MNE eligibility	Eligible as Ultimate Recipients — Leads or Co-Leads *(conditions apply – see Section 10)*	Not eligible for funding; Collaborator only
Exit TRL	TRL 7 or higher	TRL 8 or higher
Other Available Services	FABrIC Advisory Services Process Development Challenge Support Other CMC delivered services *(See Section 12)*	FABrIC Advisory Services IoT Product Development Challenge Support Other CMC delivered services *(See Section 12)*

Requirements common to both tracks

The following parameters apply to both Fabrication Process Development and IoT Product Development Challenges:

Maximum funding per project	Up to $1M, with up to $1.5M or more considered in exceptional cases
Management fee	2.5% to CMC Microsystems
Capital equipment	Ineligible
Minimum / maximum project size	$675K / $4M
Maximum project duration	24 months
Assessment model	Three equal-weight criteria families, each representing one-third of the assessment
Lead / Co-Lead structure	One Lead and one Co-Lead preferred. Additional Co-Leads may be considered where applicants demonstrate

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	the ability to execute complex, multi-partner projects. Projects with one or more Co-Leads require IP sharing agreements among the parties.

5. Definitions

Lead Organization	The organization leading the project proposal process, seeking funding through FABrIC, the FABrIC main point of contact and, if successful, the organization that ultimately becomes the "Lead Ultimate Recipient" in the Ultimate Recipient Agreement, responsible for overall management of the project. The Lead Organization must be a FABrIC member.
Co-Lead Organization	An organization, together with the Lead Organization, that is seeking funding from FABrIC and who is signing onto the Ultimate Recipient Agreement with a Lead Organization. Each FABrIC Expression of Interest (EOI) and Full Proposal should have only a single Co-Lead Organization. *NOTE: FABrIC will consider additional Co-Leads on a case-by-case basis, based on the details of the full proposal, the project and financial contributions of each Co-Lead. Co-Lead Organization(s) must also be FABrIC member(s) - see fabricinnovation.ca/member*
Collaborator	An organization that is not a signatory to the Ultimate Recipient Agreement and is not seeking funding from FABrIC, but (1) is included in a project work plan and is responsible for project activities outlined in a project proposal and/or (2) is making an in-kind contribution to a project that enables completion of project activities. Up to six (6) Collaborators per proposal are acceptable.
Ultimate Recipient Agreement (URA)	The agreement that will eventually confirm a successful proposal and be signed by the Lead Organization and Co-Lead organization(s), setting out the terms and conditions of the proposed and approved project.
Ultimate Recipient (UR)	One or more Lead/Co-Lead Organization(s) who receive funding and carry out eligible projects as part of a Challenge project.

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6. Funding Opportunities

Parameter	Fabrication Process Development	IoT Product Development
Maximum Funding per Project	Typically, up to $1M *NOTE: Funding request for up to $1.5M or more will be considered in exceptional cases with robust details in the EOI and full proposal*	Typically, up to $1M *NOTE: Funding request for up to $1.5M or more will be considered in exceptional cases with robust details in the EOI and full proposal*
Reimbursement Rate	40% of eligible project expenses	37% of eligible project expenses
Minimum / Maximum Project Size	$675K / $4M *NOTE: where FABrIC funding is approved for more than $1M, the maximum project size may be larger*	$675K / $4M *NOTE: where FABrIC funding is approved for more than $1M, the maximum project size may be larger*
Maximum Project Duration	24 months	24 months
Management Fee	2.5% of funding to CMC Microsystems for program administration	2.5% of funding to CMC Microsystems for program administration
Capital Equipment	Ineligible	Ineligible
Advisory Services, Challenge Support	See Section 12	See Section 12
Payment Schedule	Quarterly reimbursement based on actual eligible project costs incurred and paid by Ultimate Recipients	Quarterly reimbursement based on actual eligible project costs incurred and paid by Ultimate Recipients

Funding Stacking Limits

Stacking of funding from other government sources is allowed within stacking limits. Other sources of government funding include, but are not limited to, non-repayable grants, loans and repayable contributions, loan guarantees, equity investments, and federal and provincial tax credits (including future SR&ED reimbursement or other tax credits as provided federally or provincially, on an accrual basis).

Stacking limits for total government funding, including FABrIC and other federal, provincial and municipal funding must not exceed:

- **Seventy-five percent (75%)** of eligible supported costs for any industry participant.
- **One hundred percent (100%)** of eligible supported costs for any post-secondary participant.

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7. Key Dates

Dates may vary slightly. Check the FABrIC website for the most current information on dates – see fabricinnovation.ca/funding

Milestone	End Date
Round 3 Review Cycle for Fabrication Process Development and IoT Product Development	
EOI Portal Open	August 10, 2026
EOI Application Due	September 8, 2026
Full Proposal Application Invites	September 14, 2026
Full Proposal Application Due	October 27, 2026
Round 4 Review Cycle for Fabrication Process Development and IoT Product Development	
EOI Portal Open	August 10, 2026
EOI Application Due	December 1, 2026
Full Proposal Application Invites	December 11, 2026
Full Proposal Application Due	February 9, 2027

Expression of Interest (EOI) Submission

EOIs should align with the FABrIC Challenge proposal Assessment Criteria outlined in Section 11.

A complete Expression of Interest (EOI) must be submitted through the FABrIC Challenges Portal. Applicants must create a Blackbaud account to access the portal and submit their EOI.

A complete EOI includes the following:

- a detailed, well-written, and clear EOI application;
- all required supporting documents;
- a proposed project budget;*
- an initial Statement of Work;
- letters of support or other evidence of commercial interest, supply chain relationships, and awareness of Collaborators, which are strongly encouraged; and*
- a completed and signed Attestation and Signature Template.

NOTE: Links to the FABrIC Challenges Portal, all required templates, and Blackbaud account instructions are published on the FABrIC website. fabricinnovation.ca/funding

* These are not expected to be final at the EOI stage

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8. Key Challenge Requirements

Fabrication Process Development and IoT Product Development:

- **Alignment**: The project must be aligned with the overall strategic objectives of FABrIC – see Section 2.
- **Commercial viability**: Projects must be designed with the intent to commercialize a semiconductor process or must commercialize a semiconductor product.
- **Intellectual Property**: Ownership of all foreground IP created through the project must remain in Canada and be used for the benefit of Canada for a minimum of five (5) years after the completion of the project.
- **HQP**: The project must contribute to the development and retention of HQP in Canada, including, for example, training for interns, job creation, and job retention.
- **Additional benefits**: The project should demonstrate other benefits to Canada including social, environmental, and economic benefits.
- **Capacity**: The Lead and Co-Lead organizations must demonstrate that they have sufficient resources to carry out the project to conclusion.
- **Duration**: Typical project duration is expected to be 12 to 24 months.
- **Need for support**: Applicants must provide evidence of the need for funding from FABrIC.
- **Incremental opportunities**: Projects must be incremental to the regular business of the participating organizations. The proposed project must not already be approved or in progress, must be distinct from investments that would have otherwise occurred, and would not be undertaken at the same scope or scale without the support of FABrIC.
- **Total project costs**: Total estimated project costs must be greater than $675K CDN. Contact the FABrIC team at challenges@fabricinnovation.ca for exceptional requests.
- **Technology Readiness Levels (TRL)**: Fabrication process(es) or IoT product(s) must demonstrate evidence of market pull at the time of the proposal.
  - > Fabrication Process(es) Development Projects must be at TRL 7 at the end of the project
  - > IoT Product Development projects must be at TRL 8 with the intent to commercialize.
- **Completion deadlines**: Projects must conclude no later than October 31, 2028, for Round 3 and December 18, 2028, for Round 4*.
- **Equity, diversity, inclusion**: The project should demonstrate alignment with and advance the principles of equity, diversity, and inclusion.
- **Domestic development**: All project work must be performed in Canada, unless otherwise pre-approved in writing. A maximum of 10% of the work (exclusive of fabrication costs) may be performed outside of Canada.
- **Eligible expenses**: Eligible expenditures must comply with the requirements that are described in the Eligible Project Expenses Guide on the FABrIC website.

* Dates may vary slightly. Check the FABrIC website for the most current information on dates – see fabricinnovation.ca/funding

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- **Project start**: Ultimate Recipients (URs) must be able to substantially start the project within 60-days from the date of award.
- **Reporting requirements**: All Ultimate Recipients are required to report on all project activities and submit financial claims and supporting documents on a quarterly basis. Other reporting may be required.
- **Detailed terms and conditions**: Additional terms and conditions will be required as stated in the Ultimate Recipient Agreement.
- **Ineligible**
  - > **Experimental or theoretical work**: Projects related to experimental or theoretical work without any direct commercial application or use will not be considered.
  - > **Capital equipment purchases**: Capital equipment purchases are ineligible* for FABrIC funding. Rental and leasing costs for required hardware will be considered.

Fabrication Process Development — Additional Requirements

Fabrication Process Development projects must also meet the following two criteria (note options):

Criterion 1	Criterion 2
Leverage and develop a novel process expanding Canadian research institute commercial prototyping capability in one (or more) of the key areas of focus: MEMS, compound semiconductors, quantum, photonics;	Result in the development and delivery of new fabrication processes or enhancements to existing fabrication processes for rapid prototyping (including multi-project wafer flows where practical) and low to medium volume semiconductor manufacturing in Canada. The process(es) must be in one (or more) of the key areas of focus including: MEMS, compound semiconductors, quantum, photonics processes;
OR	**OR**
Leverage and expand existing Canadian commercial fabrication capabilities and services in industry. The process(es) must be in one (or more) of the key areas of focus including: MEMS, compound semiconductors, quantum, photonics.	Contribute to the development and growth of coherent supply chains for the development and manufacturing of new and innovative products in Canada. Collaboration between fabrication partners is encouraged.

IoT Product Development — Additional Requirements

IoT Product Development projects must also meet all the following criteria:

- Include the design, development and commercialization of novel advanced sensors and other semiconductor products in Canada.
- Manufacture a semiconductor device, e.g., prototype or production device using either MPW or dedicated mask set for commercial purposes.
- Align to one or more of the strategic sectors listed in Section 3 – IoT Product Development Challenge Themes.

* some exceptions with ISED approval

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9. Basic Eligibility for Applicants

Applicants for both Fabrication Process Development and IoT Product Development Challenges must meet all the following criteria:

- Lead and Co-Lead organizations must be incorporated or a registered business in Canada and have significant operations in Canada.
- Lead and Co-Lead organizations include:
  - > For-profit Small and Medium-sized Enterprises (SMEs) with between 3 (full time) and 499 employees for both Lead and Co-Lead organizations.
  - > The Lead and Co-Lead organization(s) must have at least three (3) full-time equivalent employees for the year preceding the full proposal.
  - > Not-for-profit organizations (incorporated under the Canada Not-for-Profit Corporations Act or similar Provincial Act) with at least three (3) full-time equivalent employees for the year preceding the full proposal.
  - > Post-secondary institutions in Canada or research institutes in Canada that are wholly owned by post-secondary institutions in Canada.
  - > Indigenous organizations in Canada.
- The Lead and Co-Lead organizations must be FABrIC Members to complete the submission of an EOI. See fabricinnovation.ca/member
- Only organizations may apply to Challenges. Individuals are ineligible.
- An organization may participate as a Lead or Co-Lead in two or more projects, depending on the category of project and the outcome of the assessment process.
- Recipients of FABrIC funding must be in compliance with economic sanctions, financial sanctions, and trade embargoes administered by the Government of Canada.
- Designated Projects (as per applicable federal environmental and impact assessment legislation) are not eligible.

Multinational Enterprise (MNE) participation

Fabrication Process Development

Multinational Enterprises (MNEs) may participate as Ultimate Recipients (URs) Leads or Co-Leads in Fabrication Process Development Challenges but must be incorporated in Canada and approved by ISED as an SME.

IoT Product Development

MNEs do not qualify to receive funding from IoT Challenges but can contribute as Collaborators.

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10. Challenge Call and Selection Process

Step 1: Challenge Call

Calls for proposals, including timelines are published on the FABrIC website (fabricinnovation.ca) and promoted via CMC Microsystems' channels. All supporting materials such as the Challenge Guide, EOI template, and Expense Guide are available on the FABrIC website.

Step 2: EOI Submissions

FABrIC Challenges operate on a Review Cycle model. Lead Organizations can submit an **Expression of Interest (EOI) at any time** but will be evaluated in the applicable **Review Cycle timeline** – see Section 7 – Key Dates.

Step 3: EOI Screening

The FABrIC Challenge team will review EOIs against the eligibility requirements as outlined in the FABrIC Challenge Guide (Sections 8, 9 and 10). All applicants will be notified of the outcome of their submissions. Successful applicants will be invited to submit a Full Proposal, while unsuccessful applicants may revise and resubmit in a future cycle.

NOTE: Round 4 is expected to be the final Challenge call.

Step 4: Full Project Proposal

Invited Lead organizations will prepare a Full Proposal, with input from their Co-Lead organization(s) (if applicable). Upon request, the FABrIC Challenge team can provide Proposal Development Advisory Services as well as Technical Advisory Services to support the development of proposals aligned with FABrIC objectives.

Step 5: Proposal Review, Assessment and Scoring

A. All proposals will undergo independent assessment by the FABrIC Advisory Committee (FAC). The FAC will convene an expert panel of up to five (5) Challenge Committee members to review, score, and rank proposals based on a defined set of assessment criteria (Section 11), ensuring alignment with FABrIC objectives and a fair evaluation process. In parallel, the FABrIC Challenge team will conduct a financial assessment of Lead and Co-Lead organization(s) to confirm their capacity to meet project commitments.

B. Each FABrIC Challenge Full Proposal will also be evaluated by expert financial staff to assess the financial viability of both the proposed project as well as the Lead and, if applicable, Co-Lead's capacity to carry out the project.

Step 6: Final Proposal Assessment and Approval

Based on the Challenge Committee's rankings and available funding, the FAC will recommend the final approval for funding of selected projects to the CMC Board. The Board will only confirm that the process has been followed and, if satisfied, approve the funding. It does not participate in project selection.

If the project is funded:

The FABrIC Challenge team will notify Innovation, Science and Economic Development Canada (ISED) of the selected projects and funding allocations, inform successful applicants, and finalize Ultimate Recipient Agreements with Lead and Co-Lead organization(s).

Applicants whose projects are not approved in the Round 3 Review Cycle will be notified. They may reapply in Round 4 Review Cycle.

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About the Assessment Committees

The FABrIC Advisory Committee (FAC) is a group of up to 15 independent, recognized Canadian experts in the five key technology areas covered by FABrIC: compound semiconductors, photonics, MEMS, quantum, and IoT (including edge AI). The FAC reports to CMC's Board of Directors.

The FABrIC Challenge Committee is a pool of up to 50 independent experts from each of the key FABrIC technology areas and includes members from industry (SMEs, MNEs) Not-for-Profits, and academia across Canada. The members have a variety of sector-specific manufacturing and technology backgrounds, as well as technical and strategic expertise.

The identity of experts participating in individual project assessments will be kept confidential. Members of the FAC and FABrIC Challenge Committees will sign non-disclosure agreements as well as conflict-of-interest disclosures to ensure independence and confidentiality.

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11. EOI Assessment Criteria for Fabrication Process Development and IoT Product Development.

Criteria	Requirement
Organizational requirements	All Lead and Co-Lead organizations are incorporated or registered in Canada with significant Canadian operations; meet the eligible organization-type criteria in Section 9; at least one Lead/Co-Lead is an SME (<500 employees); all Lead organizations and Co-Lead organizations must have a minimum of 3 full-time equivalents for the year preceding the full proposal; all Co-Leads and Collaborators have agreed to participate; Canadian operations are substantial with appropriate autonomy.
Project alignment with FABrIC and call objectives	Project develops Made-in-Canada processes or products, develops HQP in Canada, and creates/retains jobs in Canada.
Project budget	Evidence of sufficient working capital and other resources to complete the project; government funding (federal, provincial and municipal) cannot exceed stacking limits (75% commercial industry / 100% post-secondary); funding request is within the Challenge-specific limits set out in Section 6; total eligible project expenses exceed the minimum threshold of $675K CDN.
Market opportunity and commercialization plan	Target markets identified; realistic TAM/SAM/SOM estimates; realistic commercialization plan; realistic revenue projections; lead or potential lead customers identified; major competitors identified.
Ability to execute	Evidence the team has the technical skills, human resources, and commercialization skills to deliver and bring product to market; critical collaborators identified; major work activities defined; current TRL is 3 or higher, with reasonable justification; planned TRL meets the Challenge-specific exit threshold (TRL 7+ for Fabrication; TRL 8+ for IoT Product Development).
Benefits to Canada	Evidence of job creation/retention and HQP training; EDI initiatives; IP that will be generated and commercialized in Canada; positive impact to the Canadian value chain and sovereignty; other social, environmental, and economic impact. Fabrication Process Development Challenges should provide Fair, Reasonable and Non-Discriminatory (FRAND) access to the process within the Canadian ecosystem
Need for FABrIC funding	Demonstrated need for FABrIC funding; evidence that the project is incremental to the organization's current business activities.

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Final Proposal Assessment — Fabrication Process Development and IoT Product Development

Final proposals are assessed against three criteria, each contributing one-third (1/3) of the total assessment score.

Major Criteria (each 1/3 weight)	Sub-Criteria
Commercial Opportunity and Outcomes	• Target markets and applications clearly identified and aligned with FABrIC's strategic objectives. • Compelling process(es) will be developed, and the organization has long-term commitment to product/product line. • Major competitors identified; reasonable competitive advantages provided; strategies for sustaining competitive advantage. • Project results in the development of differentiated and/or disruptive technology for Canada. • Compelling commercial opportunity identified (TAM/SAM/SOM, expected revenue, volumes). • Lead and/or potential customers identified; effective customer engagement plan. • Supporting letters from industry experts, advisors, and lead customers. • Clear and reasonable commercialization plan from within Canada. • Clear roadmap to achieve and sustain 5-year revenue forecasts. • Effective scale-up and production manufacturing plans. • Critical supply chain partners identified.
Advancement of the FABrIC Ecosystem and Overall Benefits to Canada	• Clearly stated objectives, anticipated outcomes, and meaningful advancement for the Canadian semiconductor sector. • Objectives and outcomes aligned with FABrIC and the Challenge call. • Job creation/retention and HQP training consistent with the scope and timeframe of the project. • Compelling, measurable business outcomes (sales/revenue, new market entry, licensing). • Foreground IP and related assets identified. • Effective plan for protection of foreground IP and commercialization from within Canada. • Effective plan for managing background and foreground IP between Lead and Co-Leads. • Demonstrates appropriate access to background IP. • Fabrication Process Development Challenges should provide Fair, Reasonable and Non-Discriminatory (FRAND) access to the process within the Canadian ecosystem • Direct, quantifiable economic benefits to Canada. • Positive impacts to Canadian sovereignty and security. • Facilitates new investment into SMEs. • Other benefits: diverse industry/government/research collaboration, sharing IP with the broader ecosystem, EDI principles — all receive favourable consideration.

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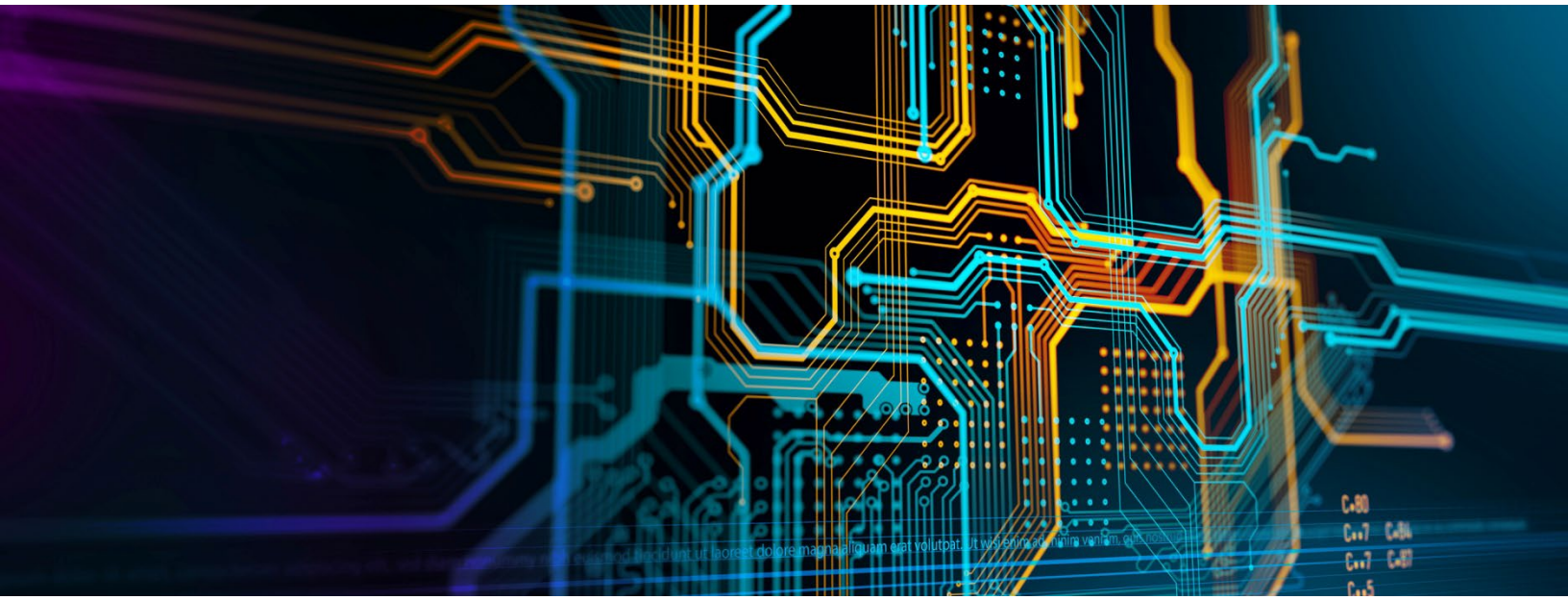
Major Criteria (each 1/3 weight)	Sub-Criteria
Project Execution Plan, Budget and Likelihood of Success	• Roles of Lead, Co-Leads, and Collaborators clear and appropriate. • Key team members and roles identified. • Team has necessary experience and expertise; supported by bios. • Evidence the team can begin within 60 days of signing the URA. • Statement of work reasonable, well-articulated, with clear tasks, milestones (minimum 4), KPIs, and deliverables. • Project timeframe and deliverables clear and feasible. • Budget clear, reasonable, and in line with project plan. • Risk register thorough; mitigation strategies reasonable and manageable. • Compelling argument outlining why the project would not proceed or achieve similar outcomes without FABrIC funding. • Evidence the project is incremental to the existing business of the organization(s).



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12. FABrIC Advisory Services and Challenge Support

FABrIC Advisory Services

FABrIC Advisors are available to applicants during the FABrIC Challenge EOI and Full Proposal development stages. Advisors can provide guidance on the FABrIC Program, Challenge application development, as well as Challenge technical advisory services*.

FABrIC Challenge Support

Comprehensive Technical Advice

CMC technical support is available to applicants during the FABrIC Challenge EOI and Full Proposal development stages. In addition, more comprehensive hands-on Technical Challenge Support is available to URs after the award of a FABrIC Challenge grant.

Streamlined Fabrication Access for IoT Product Development

Awarded projects can benefit from streamlined access to advanced technology and services – augmenting your team's capabilities to support its success. For more information: fabricinnovation.ca/product-challenge-support

Technology Support for Process Development Support

Awarded projects can benefit from PDK and process development support, providing access to specialized expertise and technical services – strengthening your team's capabilities from design through fabrication and validation. For more information: fabricinnovation.ca/process-challenge-support

Additional services available through CMC Microsystems

CMC offers additional services outside the scope of Challenge Support, including development and design services, fabrication of advanced technologies, custom packaging, and CAD tools for startups through the VIE program. For further information contact: challenge.support@fabricinnovation.ca

* Receiving pre-submission advisory services and technical advice does not guarantee the success of a FABrIC Challenge grant application

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13. Technology Readiness Levels (TRLs)

For the purposes of FABrIC Challenge proposals, applications should describe the TRL the research is currently working to achieve. Activities for proposed projects will generally fall under Technology Readiness Levels (TRLs) 3 to 7 but could cover the whole range of TRLs 1 to 9.

Innovation, Science and Economic Development Canada (ISED) describes stages of development, including a TRL assessment tool and checklist, online at: ised-isde.canada.ca/site/innovation-canada/en/technology-readiness-levels

Technology Development Stage	TRL	Definition	Description
Fundamental Research	**1**	Basic principles observed and reported	Scientific research begins to be translated into applied research and development (R&D). Activities might include paper studies of a technology's basic properties.
	2	Technology concept and/or proposal formulated	Invention begins. Once basic principles are observed, practical applications can be invented. Activities are limited to analytic studies.
Research and Development	**3**	Analytical and experimental critical function and/or proof of concept	Active research and development is initiated, including analytical studies and/or laboratory studies. Activities might include components that are not yet integrated or representative.
	4	Product and/or process validation in laboratory environment	Basic technological components are integrated to establish that they will work together. Activities include integration of "ad hoc" hardware in the laboratory.
	5	Component and/or validation in a simulated environment	The basic technological components are integrated for testing in a simulated environment. Activities include laboratory integration of components.
Pilot and Demonstration	**6**	System/subsystem model or prototype demonstration in a simulated environment	A model or prototype that represents a near-desired configuration. Activities include testing in a simulated operational environment or laboratory.
	7	Prototype ready for demonstration in an appropriate operational environment	Prototype at planned operational level and ready for demonstration in an operational environment. Activities include prototype field testing.
	8	Actual technology completed and qualified through tests and demonstrations	Technology has been proven to work in its final form and under expected conditions. Activities include developmental testing and evaluation of whether it will meet operational requirements.
Early Adoption	**9**	Actual technology proven through successful deployment in an operational setting	Actual application of the technology in its final form and under real-life conditions, such as those encountered in operational tests and evaluations. Activities include using the innovation under operational conditions.

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14. Equity, Diversity and Inclusion (EDI)

The FABrIC project is powered by and managed by CMC Microsystems. CMC is unwavering in its commitment to the principles of Equity, Diversity, and Inclusion (EDI). We believe that fostering an inclusive environment enhances innovation, creativity, and excellence. We recognize that a breadth of perspectives, skills, and experiences contribute to excellence in research and innovation. This culture is the responsibility of every participant in the ecosystem, including employees, funders, investors, sponsors, institutions, companies, researchers, advisors, administrators, and reviewers. As part of our dedication to EDI, CMC is also actively participating in the Government of Canada's 50-30 Challenge, which aims to accelerate gender parity and the inclusion of under-represented groups in leadership roles.

EDI is a cornerstone of our governance and operational practices. FABrIC Challenge, Innovation Platform, and Ecosystem Development proposals that advance EDI principles are given additional assessment points, reflecting our commitment to creating a diverse and inclusive community. We recognize that embracing EDI is not just a goal, but a continuous journey. By embedding these values into our decision-making and resource allocation processes, we aim to ensure that our investments yield the maximum benefit for all members of our community.

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