

Major Innovation Fund Call for Proposals 2018-2019

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TABLE OF CONTENTS

1. OVERVIEW.....	1
2. CHALLENGE.....	1
3. FUNDS AVAILABLE.....	2
4. TIMELINES.....	2
5. STRATEGIC ALIGNMENT.....	3
6. ELIGIBILITY.....	3
7. ELIGIBLE & NON-ELIGIBLE COSTS.....	4
8. PARTNER CONTRIBUTIONS.....	4
9. REVIEW CRITERIA.....	5
10. SUBMISSIONS.....	6
11. REVIEW PROCESS.....	7
12. GRANT AGREEMENT.....	7
13. CONTACT INFORMATION.....	7

1. OVERVIEW

A strong research and innovation system requires a talented and diverse group of researchers, innovators, and entrepreneurs. There is a need to continually develop skills, attract and retain talent, and build capacity in multiple sectors. Investment in post-secondary institutions, research centres, and industry-led projects is a way to target the development of skills and showcase Alberta's ability to attract and retain local and global talent. Alberta has known capacity in various sectors such as energy, agriculture, health, platform and emerging technologies (e.g., such as nanotechnology, artificial intelligence and advanced manufacturing). Making strategic investments will bolster Alberta's capacity and capability, attract and retain top talent, support our industries and local businesses, and provide the opportunity for increased federal investments in Alberta's initiatives.

A strategically-driven approach to research and innovation investments will allow Alberta to build capacity in target areas and successfully compete for federal funding. This initiative, proposed as the Major Innovation Fund (MIF) will further build capacity and create Alberta-led projects and initiatives.

The MIF is built on continuous engagement with post-secondary institutions and research centres¹ and their areas of high potential and research and innovation strength. Alberta works with institutions and organizations to identify and allocate resources to a promising area of research, potentially warranting both industry and federal support. This would build capacity, attract talent, and additional investment by highlighting unique-to-Alberta initiatives.

2. CHALLENGE

Post-secondary institutions will have the opportunity to submit proposals in key areas in an effort to advance transformative research and innovation projects. Building on the outcomes and innovation targets in the Alberta Research and Innovation Framework and federal priorities, the MIF challenges institutions to assemble a team of research excellence and innovative capacity in the following areas:

- Antimicrobial Resistance
- Autonomous Systems
- Building and Construction Innovations
- Food from Smart Agriculture
- Indigenous, Rural, and Remote Water Management
- Quantum Computing

Refer to appendix 1 for more information on the challenge areas.

¹ Including both Universities and government-affiliated non-profit centres

The MIF is guided by the following principles:

1. **Strategic alignment** to current and future sector needs and government priorities; this will maximize benefits through leveraging and joint investments with other levels of government and industry stakeholders.
2. **Sound governance** that considers the strategic value of the various proposals. This will ensure investments are used effectively to achieve the objectives as defined by Alberta's policies and strategies and will place accountability measures around initiatives.
3. **Sharing of interests** and priorities between institutions, industry, and other stakeholders will create confidence in future system collaboration and integration initiatives. This will create a shared understanding of expected results when funding is received for various initiatives. Organizations will create value by sharing specialized investments, facilities, scientific capabilities, and practical skills.
4. **Community impact** demonstrated through clear knowledge translation and application mechanisms (e.g. application of knowledge into health system, environmental applications) and/or commercialization with Alberta industry.

These principles will create a foundation for increasing future investment opportunities, and form the basis for responsible provincial investments, allowing Alberta to maximize its research and innovation potential. The MIF will enable post-secondary institutions and research centres to strive to meet the following objectives:

- Creation of a collaborative research and innovation environment that allows for talent attraction, development, and retention in support of new technology;
- Enhancement of knowledge through development of new partnerships, publications, and patents;
- Increase in leverage to ensure a meaningful and beneficial project outcome; and
- Benefit to social, health, environmental, and economic outcomes for Albertans.

3. FUNDS AVAILABLE

The available allocation to this competition is up to \$20M over three years to support a 5-year project.

The MIF Program will provide up to 50% of the applicant's identified total project cost, up to a maximum of \$10M over three years.

4. TIMELINES

Dates	Activity
November 1, 2018	Application Deadline
November – December 2018	Committee Reviews and Meetings
February 2019	Decisions

5. STRATEGIC ALIGNMENT

All MIF proposals must demonstrate alignment with Government of Alberta's [Alberta Research and Innovation Framework \(ARIF\)](#). The ARIF establishes outcomes for Alberta's research and innovation system and includes innovation targets around which research and innovation stakeholders can rally to deliver results for Albertans. The targets, developed by the Government of Alberta and Alberta Innovates, with input from post-secondary institutions and industry leaders, support increasing Alberta's competitiveness, growth and export readiness in sectors of strengths.

Identification of alignment to federal priorities to demonstrate for additional future leverage from federal sources is strongly desired.

6. ELIGIBILITY

ELIGIBLE INSTITUTIONS

The MIF defines a lead eligible institution as any of the Comprehensive Academic and Research Institutions as per Alberta's Roles and Mandates Framework².

Please note that only eligible institutions, not individual researchers, may submit a proposal to the MIF. Please contact the institution's research office to learn about institutional processes.

INSTITUTIONAL ENVELOPES

For the 2018-19 competition, the MIF restricts the submission of two lead proposals per institution.

Institutions must manage their envelope strategically in order to lead as well as support participation in collaborative and regionally important activities.

PARTNERSHIP REQUIREMENTS

Institutions must partner the other eligible universities and with at least two colleges or technical institutes, located in Alberta, with demonstrated capacity to conduct research and contribute to the business environment.

Collaboration is further encouraged to extend to research institutes and centres, such as the Alberta Centre for Advanced MNT Products and TECTERRA, as well as national and international entities, to identify and promote regionally integrated projects with the potential for greater impact.

In addition to tangible contributions, letters of support are strongly encouraged from industrial and other partners to further demonstrate genuine partnerships.

² <http://advancededucation.alberta.ca/post-secondary/institutions/public/types/>

7. ELIGIBLE & NON-ELIGIBLE COSTS

Funding from the MIF program may be used towards the following costs:

- Personnel (e.g.) technicians, post-doctoral fellows, program administration
- Students as per Tri-Council guidelines³
- Research operating expenditures, laboratory start-up, supplies
- Knowledge mobilization / commercialization costs

The following list identifies non-eligible costs:

- Capital infrastructure (buildings)
- Faculty Salaries
- Establishment of scholarships (stipends can be used for student recruitment)
- Sub-competitions within the program

8. PARTNER CONTRIBUTIONS

As the MIF will provide up to 50% of the identified project total cost, applicants must identify and have a plan in place for securing the balance of project costs from eligible funding sources. Leveraged funding must be directly related to the scope of work as presented in the submitted proposal. Any eligible cash contributed before the proposal is submitted may be used to start the project, but EDT will not leverage eligible in-kind contributions received or funds spent more than six months prior to the date of submission. Expenditures are considered incurred when goods are received, services have been rendered or work has been performed.

ELIGIBLE PARTNERS

Accordingly, the MIF considers any of the following as possible sources of contributions:

- Institutional funds (i.e., derived from applicant institution)
- Natural Sciences and Engineering Research Council (NSERC)
- Canadian Institutes for Health Research (CIHR)
- Social Sciences and Humanities Research Council (SSHRC)
- Canada Research Chairs (CRC)
- Tri-council programs (e.g., Networks of Centres of Excellence and Canada Research Chairs)
- Other government sources
- Business and industry
- Non-profit organizations
- Philanthropic donations
- InnoTech Alberta
- Endowments
- User fees
- Licensing fees and royalties

³ http://www.nserc-crsng.gc.ca/Professors-Professeurs/FinancialAdminGuide-GuideAdminFinancier/FundsUse-UtilisationSubventions_eng.asp

NON-ELIGIBLE PARTNERS

Due to the intent of the MIF, the following organizations are **not permissible as partners**:

- Canada Foundation for Innovation
- Other Government of Alberta Ministries or Agencies
- Alberta Innovates (with the exception of InnoTech Alberta and C-FER Technologies)

IN-KIND CONTRIBUTIONS

The MIF will accept In-kind contributions as eligible matching. In-kind for the MIF is defined as a valuation of a donation of time, materials or goods by companies or organizations, including use of space that supports the delivery of the program. The applicant must provide a detailed methodology to support any in-kind contribution, which will be assessed by MIF program staff.

9. REVIEW CRITERIA

As per the [MIF Application Form](#), proposals will be evaluated using the following key criteria:

1: THE STRATEGIC CONTEXT

- **Need:** a well-structured statement that addresses the challenge, as developed in collaboration with the end-user community (e.g., industry, agencies, etc.).
- **Anticipated Outcomes:** The expected result or benefit, and timeframe, that the organization is striving to achieve at the end of the investment and the mechanisms to achieve those outcomes.
- **Strategic Fit:** Demonstrate alignment within the organization's broader strategic context, the ARIF, federal priorities, and tapping expertise across Alberta to achieve best possible results.
- **Benefits to Alberta and Canada:** Plans and/or technology transfer pathways, including partnerships with industry that will likely generate benefits for Albertans and Canadians.

2: THE RESEARCH

- **The Research Plan:** Describe the research themes and rationale for how each theme will contribute to the expected outcomes. Delineate the roles of each partner institution and principal investigator in pursuing these themes.
- **Scientific Excellence:** Describe the existing capacity, including past key investments in people (researchers and highly qualified personnel) and infrastructure, on which the project builds. Explain how these investments have led to research or technology development.

3: THE COMPETITIVE CONTEXT

- **Regional Advantage:** This proposal enables leading-edge research programs that are used by researchers and partners of the highest caliber. The advantage in the region can be demonstrated by discussing the unique strengths of Alberta institutions and their existing connections with national and international partners.
- **Innovation Environment:** Describe the training opportunities that will attract highly qualified personnel (including technicians and professionals) and allows them to acquire skills for research and other careers.
- **Stakeholder Analysis:** Describe the stakeholder environment by considering the types of stakeholders (e.g., industry, SMEs, other federal/provincial government departments/agencies, etc.), their specific roles, and their tangible contributions to the realization of the investment. Identify current and potential partners.

4: BUDGET REQUIREMENTS

- **Costs:** Provide a complete description, and justification, of the costs over eligible categories over the life of the project.
- **Contributors:** Provide an estimate of targeted partner contributions (including institutional).

5: MANAGEMENT AND MEASUREMENT

- **Management and Implementation Strategy:** Demonstrate a sound methodology to manage the project, including the identification of milestones and critical success factors. An approach to gender and intersectional considerations should be included.
- **Sustainability Strategy:** Provide detailed information on operating and maintenance costs and revenue sources, including institutional commitment to ensure that this initiative will be viable and self-sustaining within 5 years.
- **Risk Management Strategy:** Demonstrate that the organization has a function in place to manage the risks of the project. Describe how the potential impact of a proposed change on organizational culture, systems, and processes and on people working within and with the invested organizations will be managed in later stages of the project management process.
- **Performance Measurement Strategy:** Report on performance indicators and provide a rationale to support the targets.

10. SUBMISSIONS

MIF applications, using the [MIF Application Form](#), must be received by 4:30 p.m. on the deadline date listed in Section 4. MIF accepts electronic submissions, to the contact listed in Section 13.

11. REVIEW PROCESS

The MIF employs an independent multi-stage review process which consists of expert reviews who will assess institutional excellence and capacity as per the MIF guidelines. Those reviews are provided to MIF's Multidisciplinary Review Panel, comprising academic and industry experts from across Canada with senior research and administrative experience.

Panel members are chosen based on their research record, area of expertise, senior leadership, knowledge of the research funding environment, commercialization knowledge, and for their collective ability to bring multidisciplinary expertise to the review process.

The review process encompasses the following stages:

1. ARIF Alignment Review by Government of Alberta and Alberta Innovates Staff
2. Assessment by Suggested Reviewers
3. Independent review by an Expert Panel
4. Decisions by the Minister of Economic Development and Trade

The Review Panel reviews all applications, taking into account the identified alignment of applications conducted by Government of Alberta and Alberta Innovates staff.

The Panel deliberations result in a set of recommendations, which are provided to the Minister to inform final decisions.

12. GRANT AGREEMENT

A grant agreement will be developed for awarded projects. This agreement will outline the terms and conditions of support and must be signed by both parties (institutional representative and Economic Development and Trade representative) prior to the release of payment. As a part of this agreement, institutions will be required to regularly report on the financial status of projects and on the outcomes achieved. The schedule and reporting requirements will be outlined in the agreement. Any significant variations in project scope or other requirements of the contract must be agreed to by both parties.

13. CONTACT INFORMATION

All correspondence including application submissions are to be directed to the following address:

Neil Sulakhe, Director
Major Innovation Fund c/o Research Capacity Planning
Economic Development and Trade
4th Floor, Phipps-McKinnon Building
10020 101A Avenue
Edmonton, AB T5J 3G2
neil.sulakhe@gov.ab.ca
780-427-6022

APPENDIX 1: MIF CHALLENGE AREAS

Economic Development and Trade has a mandate to deliver economic growth and diversification to benefit Albertans, recognizing the role policy plays to increase prosperity. The following challenge areas were developed with existing cross-ministry research and innovation Collaboratories, Alberta Innovates, and represent Alberta's potential for impact on ARIF innovation targets by leveraging academic strengths to deliver results for Albertans.

Research teams will work with end-users (e.g., industry/agencies) to determine the focus and path to impact under each of these broad challenge areas.

<h3>Antimicrobial Resistance</h3> <ul style="list-style-type: none">• Improve human and animal health by reducing antimicrobial use through new policies, processes and alternative products.	<h3>Indigenous, Rural, & Remote Water Management</h3> <ul style="list-style-type: none">• Improve water management for indigenous, remote, and rural communities through collaboration, and creation of innovative policy recommendations and competitive scalable technologies.	<h3>Autonomous Systems</h3> <ul style="list-style-type: none">• Establish Alberta as a leader in advanced autonomous systems and sensor technologies, informed by artificial intelligence capabilities for economic growth.
<h3>Food from Smart Agriculture</h3> <ul style="list-style-type: none">• Meet world demand for food by 2050 and create value-added products using smart agriculture technologies.	<h3>Building & Construction Innovations</h3> <ul style="list-style-type: none">• Establish international leadership in smart and sustainable building and construction to drive growth and diversification in a low carbon economy.	<h3>Quantum Computing</h3> <ul style="list-style-type: none">• Establish Alberta as a hub for Quantum Canada by integrating Alberta's internationally recognized academic excellence, partnerships and industry engagement.

APPENDIX 2: MIF PERFORMANCE MEASUREMENT

The MIF is an outcomes-based program designed to accelerate innovation capacity to contribution to solutions and results in the identified challenge areas for Albertans. MIF expects that proponents will provide evidence-based reporting that includes measurement and assessment in the following categories:

Category	Indicators	Target	Target	Target	Target	Target
		Year 1	Year 2	Year 3	Year 4	Year 5
Discover	<ul style="list-style-type: none"> • Training of Highly Qualified People (HQP) • HQP attracted to Alberta • Retention of HQP • Publication in academic journals (prestigious journals) • Amount of follow on funding • Industry investment in research and development 					
	<ul style="list-style-type: none"> • Citations • Patent citations • Research results progressing to the translational research/development stage • Events/collisions/activities between the research team and end-users (e.g., industry; relevant agencies, entrepreneurs, SMEs) 					
Use	<ul style="list-style-type: none"> • Partnerships with industry • Patents licensed by industry, within Alberta and outside • Prototype or other results ready for use as products, policies, and practices • Start-ups 					

Definitions:

Discover: Creating new knowledge or understanding without specific applications in mind.

Develop: Development of products from the discovery stage towards particular use, often as an innovative technology or product.

Use: Products, policies, practices, and processes ready for implementation and/or market entry.