2023 Innovation Fund

Draft call for proposals

October 2021



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About the Canada Foundation for Innovation

The Canada Foundation for Innovation (CFI) makes financial contributions to Canada's universities, colleges, research hospitals and non-profit research organizations to increase their capability to carry out high-quality research.

The CFI invests in infrastructure that researchers need to think big, innovate and push the boundaries of knowledge. It helps institutions to attract and retain the world's top talent, to train the next generation of researchers and to support world-class research that strengthens the economy and improves the quality of life for all Canadians.

A promising future, now

25 years of investing in ideas that change our world

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Part 1 – What you need to know about this competition

Purpose of the Innovation Fund

The success of the Canadian research community rests on its ability to realize the full potential of both its people and its infrastructure. The Innovation Fund provides continued investments in infrastructure, across the full spectrum of research, from the most fundamental to applied through to technology development.

The Innovation Fund supports a broad range of research programs including those in natural, social and health sciences, engineering, humanities and the arts, as well as interdisciplinary research.

Projects funded through the Innovation Fund will help Canada remain at the forefront of exploration and knowledge generation while making meaningful contributions to generating social, health, environmental and economic benefits and addressing global challenges.

Research infrastructure projects should:

- · Be aligned with the institution's strategic priorities
- Be of appropriate maturity and offer the best potential for transformative impact
- Allow teams and institutions to build on established capacity to accelerate current research and technology development or to enhance emerging strategic priority areas
- Enable teams to fully exploit research infrastructure and drive world-class research.

For a summary of changes and improvements to the Innovation Fund since the 2020 competition, see <u>Appendix 1</u>.



The CFI's commitment to equity, diversity and inclusion

The CFI is committed to the principles of equity, diversity and inclusion. In all our activities, we recognize that a breadth of perspectives, skills and experiences contribute to excellence in research.

Equity: We aim to ensure all CFI-eligible institutions have the opportunity to access and benefit from our programs and CFI-funded infrastructure through our well-established, fair and impartial practices.

Diversity: We value attributes that allow institutions and their researchers — from any background and from anywhere — to succeed. This includes individual attributes such as gender, language, culture and career stage; institutional attributes

such as size, type and location; and attributes that encompass the full spectrum of research, from basic to applied and across all disciplines.

Inclusion: We encourage a culture of collaboration, partnership, contributions and engagement among diverse groups of people, institutions and areas of research to maximize the potential of Canada's research ecosystem.

We believe that nurturing an equitable, diverse and inclusive culture is the responsibility of every member of the research ecosystem, including funders, institutions, researchers, experts and reviewers.

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Our equity, diversity and inclusion strategy for this competition

We developed our equity, diversity and inclusion strategy for this competition in consultation with stakeholders across Canada and based on the approach of the Tri-agency Institutional Programs Secretariat's New Frontiers in Research Fund. We encourage applicants to consult the Best Practices in Equity, Diversity and Inclusion in Research for that fund as a valuable resource when preparing their proposal.

Here are two key elements of our strategy:

Team composition: a new criterion

In keeping with our commitment to equity, diversity and inclusion, we have introduced "Team composition" as a new criterion for this competition. This criterion will focus on the team's consideration of:

- Systemic barriers specific to the field of research
- Principles of equity and diversity in the team's composition
- Ways of ensuring an inclusive and collaborative research environment.

Assessing expertise more inclusively through non-traditional research outputs

For this competition, both traditional and non-traditional research outputs will be used to more inclusively assess the experience and expertise of team members. (See "What are traditional and non-traditional research outputs?")

This is in keeping with the San Francisco Declaration on Research Assessment, to which we are a signing party.

For proposals to this competition, the "List of published contributions" section of the CV, renamed "Most significant contributions," now allows applicants to include a wide range of research outputs and impacts not limited to published contributions.

Objectives of this competition

The objectives of the 2023 Innovation Fund competition are to:

- Enable internationally competitive research or technology development through the equitable participation of expert team members
- Enhance and optimize the capacity of institutions and research communities to conduct the proposed research or technology development program(s) over the useful life of the infrastructure
- Lead to social, health, environmental and/or economic benefits for Canadians.

Application process

See Part 2, "How to apply," for details on how to complete each stage of the application process.



Important dates

Activity	Deadline
CFI issues draft call for proposals	Oct 27, 2021
Deadline to submit feedback on the draft call for proposals	Nov 12, 2021
CFI issues call for proposals	Nov 24, 2021
Deadline to submit notices of intent	Feb 23, 2022
Deadline to submit proposals	Jun 1, 2022
Review by Expert Committees	Jul – Nov 2022
Review by Multidisciplinary Assessment Committees	Jan 2023
Review by Special Multidisciplinary Assessment Committee	Feb 2023
Decision by CFI Board of Directors	Mar 2023

Competition budget

The CFI will invest up to \$400 million in research infrastructure funding and will fund up to 40 percent of a project's eligible infrastructure costs. It will also provide up to \$120 million for associated operating and maintenance costs through the Infrastructure Operating Fund (IOF).

Institutional envelopes

Institutional envelopes fix the upper limit of funding an institution can request if it submits or collaborates on multiple proposals. The envelope size is based on the share of research funding the institution received from the three federal research funding agencies over the period 2017–18 through 2019–20 (which is the most recent available data).

Research hospitals and research institutes must apply within the institutional envelope of the eligible university with which they are affiliated.

The sum of all institutional envelopes is 2.75 times the competition budget, which allows us to aim for an approximate funding rate of 35 percent. Refer to <u>Appendix 2</u> of this document for the list of institutional envelopes.

Eligible institutions without a specified institutional envelope will receive an envelope of \$2 million.

Adhering to your institutional envelope

At the notice of intent deadline, your institution can exceed its institutional envelope by up to 10 percent. However, at the proposal deadline, the total value of CFI funding requested by your institution must be within its envelope.



Is there additional funding for multiinstitutional projects?

You can request additional funding of up to five percent of the CFI contribution for proposals that bring together three or more CFI-eligible collaborating institutions that will each house part of the infrastructure and/or pool resources. This is to cover administrative costs associated with the management and governance of those projects. This additional funding request does not come from your institutional envelope.

Include justification for these additional funds in the proposal, which will be subject to the merit-review process. (See "Requesting additional funding for multi-institutional projects".)

Institutions, hospitals and research institutes already affiliated with a CFI-eligible institution are not considered collaborating institutions for this additional funding.

Envelope exemption

If your institution submits or collaborates on a single proposal, it is no longer restricted by its institutional envelope.

Operating and maintenance costs

We will contribute to the operating and maintenance (O&M) costs of funded projects through our <u>Infrastructure Operating Fund</u>. Your institution will automatically receive an allocation equivalent to 30 percent of the CFI contribution to your funded projects.

Eligible institutions

Canadian universities, colleges, research hospitals and non-profit research institutions <u>recognized as</u> <u>eligible to receive funding from the CFI</u> can apply to this competition. If your institution is already eligible, make sure your institutional agreement with the CFI is up to date before you submit a proposal.

Institutions that are not currently eligible must provide the necessary documentation to become eligible no later than ten weeks before the notice of intent deadline. Email us at eligibility@innovation.ca to find out more about the process and required supporting documentation to apply for institutional eligibility.

Eligible infrastructure projects and costs

An eligible infrastructure project involves acquiring or developing research infrastructure to increase research capacity and support world-class research. Eligible costs are described in section 4.6 of our Policy and program guide.

To be eligible for funding, research infrastructure expenditures and in-kind contributions **must have taken place on, or after, November 1, 2020**. We consider expenditures incurred once goods are received, services have been rendered or work has been performed.

Consult our Policy and program guide for more information on eligible infrastructure projects.

Infrastructure projects located at national or international research facilities

If the infrastructure you are proposing will be located at a national or international research facility, your institution must:

- Consult with the host facility
- Comply with the facility's established planning and project approval processes
- Obtain the approval of the host facility before submitting a notice of intent.

We may seek confirmation from the research facility regarding its commitment to host the proposed project.



Is there a minimum cost for projects to be considered?

Total project costs must be greater than \$1 million for proposals to be considered for this competition.

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Advanced research computing infrastructure

Proposals that include advanced research computing infrastructure and related resources to carry out a research or technology development project are eligible. However, proposals that focus predominantly on major, collective and shared advanced research computing infrastructure are not. These advanced

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research computing needs are addressed through the <u>Digital Research Alliance of Canada</u> (formerly the New Digital Research Infrastructure Organization (NDRIO)) created by Innovation, Science and Economic Development Canada in April 2019.

Investments in advanced research computing infrastructure are maximized when those resources are shared. For that reason, we expect that new or additional research computing resources funded through this competition and which cost more than \$100,000 will typically be housed, managed and operated by the Digital Research Alliance of Canada (the Alliance).

If your proposal includes research computing infrastructure that would be housed, managed and operated by the institution, include compelling arguments for why it is better to do so.

Consult with the Alliance if you are planning to request advanced research computing infrastructure. <u>Visit the Alliance's website</u> for information on their established process for facilitating collaboration with institutions.

For questions about the eligibility of advanced research computing infrastructure, contact us at 2023IF@innovation.ca.

Review process

Through our structured merit-review process, we ensure that proposals are reviewed in a fair, competitive, transparent and in-depth manner. The following sections outline the review process for proposals for this competition, including the roles and responsibilities of each committee.

Expert Committees

In the first stage of review, Expert Committees review small groups of proposals from the same area of research to assess their strengths and weaknesses in relation to the assessment criteria. This process is tailored to the nature and complexity of the proposal.

Only proposals that meet the competition's threshold of excellence will move to the next stage. (See "What is the threshold of excellence?")

Multidisciplinary Assessment Committees

In the second stage of review, the Multidisciplinary Assessment Committees (MACs) assess the proposals that meet the threshold of excellence at the Expert Committee stage. Each MAC reviews groups of proposals of similar size and/or complexity and assesses them against the three competition objectives.

One or more MACs exclusively review proposals submitted by small institutions. (See "<u>How are small</u> institutions defined?")

We choose MAC members for their broad understanding of the research environment. The membership of each committee is adjusted to reflect the proposals being assessed. For instance, the MAC that reviews proposals from small institutions will be composed of members knowledgeable of such an environment. Similarly, the MAC that reviews large-scale proposals will include members with expertise in the management of large research facilities.

All MACs will include members that are well-versed in principles of equity, diversity and inclusion.

Following a careful analysis of the proposals and the Expert Committee reports, the MACs are then responsible for:

• Identifying proposals with significant weaknesses in the "Team composition" criterion. These will be removed from the competition



- Identifying proposals that demonstrate the highest standard of excellence and best meet the three competition objectives relative to other competing requests
- Providing a funding recommendation and funding amount for each proposal for the next stage of review.

Special Multidisciplinary Assessment Committee

In the third and final stage of review, a Special Multidisciplinary Assessment Committee (S-MAC) reviews reports from the MAC meetings for the proposals recommended for funding. The S-MAC makes sure the MACs were consistent in their assessment. If recommendations from the MACs exceed the available budget, the S-MAC recommends to the CFI Board of Directors the proposals that best support the CFI's mandate, meet the objectives of the competition and represent the most beneficial portfolio of investments for Canada.

Collaborating with provinces and territories

To coordinate the review processes and avoid duplication of efforts, we will share a list of the notices of intent submitted and provide proposals and Expert Committee reports, along with the names and affiliations of committee members, to relevant provincial and territorial funding authorities.

We will disclose the list and committee reports only in accordance with agreements between the CFI and provincial or territorial authorities, as permissible pursuant to the Privacy Act.

We will also invite representatives of the relevant provincial or territorial authorities to participate as observers at the Expert Committee stage. They will have the opportunity to submit their views on proposals for consideration by the S-MAC.

We encourage institutions to work with relevant provincial and territorial funding authorities as partners at an early stage in the planning and development of proposals.

Funding decisions

The CFI Board of Directors will make funding decisions for this competition at its March 2023 meeting. Following this meeting, we will notify your institution of the decisions and share the review material for your proposals.



What is the threshold of excellence?

The threshold of excellence to progress to the MAC varies based on the size of the administrative institution. (See "How are small institutions defined?")

For small institutions — Proposals that receive four or more ratings of "Satisfies the criterion standard with only a few minor weaknesses" or better meet the threshold of excellence.

For all other institutions — Proposals that receive both of the following meet the threshold of excellence:

- Four or more ratings of "Satisfies the criterion standard with only a few minor weaknesses" or better; and,
- Three or more ratings of "Satisfies the criterion standard in all aspects" or better.



How are small institutions defined?

Small institutions are defined as those whose share of research funding received from the three federal research funding agencies is less than one percent.



What are the assessment criteria?

Expert Committees evaluate proposals based on six assessment criteria:

Research or technology development — The research or technology development program(s) are innovative, feasible and internationally competitive.

Team expertise — The team comprises the breadth of experience and expertise needed to conduct the proposed research program(s).

Team composition — Principles of equity and diversity were considered in the team composition including in its leadership. There is a commitment to create an inclusive environment where all team members are fully integrated and supported in the research team.

Infrastructure — The requested infrastructure is necessary and appropriate to conduct the proposed research program(s) and optimally enhances existing capacity.

Sustainability — The infrastructure will be optimally used and maintained over its useful life through tangible commitments.

Benefits — The team and its partners have a well-defined plan to transfer the results of the research or technology development program(s). The results are likely to lead to social, economic, health or environmental benefits for Canadians.

See Part 2, "How to apply," for details on how to address each assessment criterion in your proposal.

Security considerations

Recipient institutions must conduct a consistent and appropriate due diligence review of potential security risks for funded projects and put in place timely measures to appropriately mitigate those risks. Tools and guidance are available through the Government of Canada's <u>Safeguarding Your Research</u> portal, <u>National Security Guidelines for Research Partnerships and Safeguarding Science</u> workshops.

The CFI reserves the right to:

- Review funded project activities on national security grounds to ensure any national security risks are identified and addressed
- Require additional intellectual property obligations of recipients to ensure that national security risks are addressed, as necessary
- Implement additional requirements, on a case-by-case basis. This could include, but is not limited to, inspection of equipment (including IT infrastructure) and periodic security briefings, as appropriate
- Decline the participation of any partners of any grounds, to maintain the security and integrity of the project.

Public announcement

The Government of Canada makes public announcements of new funding from the Innovation Fund. We organize these national announcements in collaboration with institutions.

Public announcements provide institutions, their researchers and partners, along with government representatives, the media and the CFI, opportunities to highlight the research and technology development enabled by CFI-funded infrastructure in their communities.

We encourage institutions to work with local and national media after the announcement to promote the benefits of research and technology development to Canadians.



Part 2 - How to apply

Tools to apply

Use the <u>CFI Awards Management System (CAMS)</u> to prepare, share and submit your notices of intent and proposals.

This call for proposals and the <u>Getting started with CAMS</u> documents contain all the information you need to apply to this competition, including the guidelines to prepare notices of intent and proposals. All submissions must conform to these guidelines. We strongly recommend that you review the completed notice of intent and proposal forms before you submit them to make sure they comply with these guidelines.

Submitting notices of intent

To be able to submit a proposal to this competition, your institution must first submit a notice of intent. After the notice of intent submission deadline, you will have access to submit a proposal in the <u>CFI</u> <u>Awards Management System (CAMS)</u>.

We use notices of intent to:

- Identify what expertise is needed to assess each proposal
- Recruit committee members
- Ensure that the requested infrastructure is eligible.

Notices of intent are not assessed as part of the merit-review process.

We will publish a list on <u>Innovation.ca</u> of the notices of intent we receive. The list will include project summaries. We encourage institutions with complementary projects to consider potential collaborations or multi-institutional initiatives, where appropriate. To this end, we may draw your attention to possible overlaps and synergies between institutions.

If you must make changes to the team leader(s) or administrative institution after you submit your notice of intent, contact 2023IF@innovation.ca as soon as possible.

The notice of intent consists of the following six sections:

- Project information
- Project summary
- Team
- Project description
- Collaborating institutions
- Suggested reviewers.

These are described below. Consult the <u>Getting started with CAMS</u> documents for more information on how to submit a notice of intent.

Project information

The "project information" section captures basic information about the project such as the title, applicant institution and keywords.



Project summary

(Maximum 1,500 characters)

Provide a short summary of the project and research. Include enough information about the proposed research activities and requested infrastructure to allow potential collaborators to identify possibilities for collaboration or multi-institutional initiatives. We will publish these summaries on our website along with the project titles, the names and affiliations of the team leaders, administrative and collaborating institutions and project keywords.

Team

We expect that the requested infrastructure will support a research team's internationally competitive research activities. These activities can revolve around a single research program or multiple ones.

The team can be comprised of researchers from different institutions, sectors and countries. You can identify only up to 10 team members, including team leader(s), in the notice of intent and proposal forms. Only the CVs of these 10 team members will be appended to the proposal. However, when addressing the team expertise and team composition criteria in your proposal, consider all users, including team leader(s), team members and other users.

Team members:

- Must have a CAMS account
- · Must accept to participate in the project before you can submit the notice of intent
- May be from organizations (Canadian or international) that are not CFI-eligible.

You can select up to two team leaders to allow you to recognize other leaders within the team and to compose a more diverse research team.

The user who creates the notice of intent in CAMS (typically an academic researcher) must be associated with the administrative institution and will be a team leader by default. They will have the opportunity to designate an additional team leader. The newly designated team leader does not need to be associated with the administrative institution.

In addition to being a team leader, the CAMS user who creates the proposal will be responsible for tasks usually under the purview of the "project leader" (e.g., submitting a proposal to the institution).

Project description

(Maximum four pages)

The project description should reflect the full scope of the planned activities. This will inform CFI staff of the breadth of expertise required on the Expert Committee to assess the merits of your proposal. It should include a:

- High-level overview of the research or technology development program(s) that will be enabled by the infrastructure and the anticipated outcomes of these activities, including expected application(s)
- Table of the requested infrastructure including a brief description and approximate cost of the major pieces
- Table of current and planned partners and other potential conflicts of interest. The table should include the name of the partner organization(s) and the name of individuals involved in the research.

Collaborating institutions

Before you can submit the notice of intent, collaborating institutions must use CAMS to accept to participate in the project and confirm their contribution, if any, from their institutional envelope. Institutions can track the use of their envelope in the report repository section of their CAMS dashboard.



Suggested reviewers

We encourage you to suggest reviewers who are at different stages of their career, with diverse backgrounds and from underrepresented groups (including those who may face systemic barriers (see "How are systemic barriers defined?")), as appropriate for the proposed program(s). The decision whether to contact the reviewers you suggest remains with the CFI.

Submitting proposals

The proposal should clearly present the project's merits and excellence. Provide enough information to enable reviewers to evaluate the proposal according to the assessment criteria and competition objectives.

If you must make changes to the team leader(s) and team members, administrative or collaborating institutions, and suggested reviewers after you submit your notice of intent, contact 2023IF@innovation.ca as soon as possible.

The proposal consists of three separate CAMS modules:

Project module — Information about the proposed project, how it meets the competition's objectives and criteria

Finance module — Information about the budgetary details of the proposal

Suggested reviewers module — List of potential reviewers who are qualified to provide an informed and impartial review of the proposal

The forms in CAMS will indicate the maximum number of characters that can be included in each section and/or the page limits for uploaded attachments.

Project module

The project module in CAMS consists of the following sections:

- Project information
- Plain language summary and project summary
- Team
- Other users
- Collaborating institutions
- Financial resources for operation and maintenance
- · Assessment criteria.

CAMS automatically populates some sections of the proposal with information provided in the notice of intent, including:

- Project information
- Team
- Collaborating institutions.

Find instructions below to fill out the remaining sections. Consult section 6 of the <u>Getting started with CAMS</u> documents for researchers and institutional administrators for more information.



Plain language summary

Provide a short summary in plain language of the proposed project. Briefly describe what is being researched, how the research is being done and why it is important. Focus on the expected impacts and benefits to Canada, beyond academic accomplishments. This summary will not be used in the review process. It may be used in the CFI's communications products and on its website if the project is funded.

Project summary

Provide a general description of the research or technology development activities to be conducted and an overview of the infrastructure you are requesting. This summary must address the extent to which the proposal meets the competition objectives. (See "Objectives of this competition.")

The project summary is limited to three pages for proposals written in English and four pages for proposals written in French. (See "Page limits.")

The project summary is the only section of the proposal we will provide to the S-MAC to help with its deliberations.

Team

CAMS automatically populates this section with information provided in the notice of intent.

Team members who accept to participate at the notice of intent stage do not need to reconfirm their participation at the proposal stage. However, newly added team members must have a CAMS account and accept to participate before you can submit the proposal.

Team leaders will have read and write access to the proposal while team members will each have read access.

Other users

In addition to the team members and team leaders, you can also identify up to 20 other users. These individuals will not be notified via CAMS of their inclusion in the proposal, so the administrative institution should make sure they have been informed and have agreed to participate in the proposal.

Collaborating institutions

Before you can submit the proposal, collaborating institutions must confirm their contribution, if any, from their institutional envelope. Institutions can track the use of their envelope in the report repository section of their CAMS dashboard.

If you add new collaborating institutions to the proposal, they must also confirm their participation before you can submit the proposal. **You must notify** 2023IF@innovation.ca **of any new collaborating institutions as soon as possible.** This will help us to avoid conflicts of interest with potential reviewers.

Requesting additional funding for multi-institutional projects

The additional contribution for multi-institutional projects (See "Is there additional funding for multi-institutional projects?") must be used solely to cover incremental administrative costs associated with the management and governance of the project.

These could include:

- Salaries of non-academic managers, professionals, administrative personnel and consultants directly involved in the governance and management of the project
- Costs related to Board of Directors and governance committee meetings, including telecommunications, document sharing and related travel.



Include a justification for this additional contribution under the sustainability criterion in the assessment criteria section. It will be subject to the merit-review process.

Enter the amount requested in the collaborating institutions section of the proposal. Note that the necessary fields will only be available once you have added the minimum number of collaborating institutions. Institutions that are affiliated with each other count only once towards the minimum of three CFI-eligible institutions (e.g., a university and its affiliated hospital(s)).

Financial resources for operation and maintenance

Find details for how to address this section in the <u>Getting started with CAMS</u> documents for researchers and institutional administrators.

Assessment criteria

For instructions on how to address each of the assessment criteria, see "Part 3 – Criterion standards and instructions."

Address each criterion according to the instructions to make your proposal as strong as possible.

Expert Committees rate the degree to which each proposal meets each criterion standard, whereas the MACs rate the degree to which the proposal meets each competition objective.

Document structure

Address the assessment criteria in a PDF document and upload it to CAMS. Include key information on how the proposal meets the objectives and assessment criteria for this competition.

Make sure the document follows the formatting guidelines for attachments outlined in the <u>Getting</u> <u>started with CAMS</u> documents for researchers or institutional administrators.

Address each criterion in the order that they appear on the following pages.

Page limits

The page limit for your PDF document depends on the amount you are requesting and on whether you write your proposal in French or English. We allow more pages for applications written in French.

This provision is in support of evidence demonstrating that documents written in French require approximately 20 percent more space than similar documents in English, and will ensure an equitable amount of space for applications written in either official language.

	Maximum number of pages		
Total CFI request (\$)	Proposals written in English	Proposals written in French	
≤ \$2 million	25	30	
>\$2 million and <\$10 million	30	36	
≥ \$10 million	35	42	

You have flexibility to address each criterion in the document you submit, including figures or diagrams, where appropriate. The distribution of pages among criteria is at your discretion, up to the total page limits noted above.



A validation error that restricts the assessment criteria attachment to the appropriate page limit will only occur when the team leader sets the proposal to "complete" and your institution sets it to "verified" or tries to submit it to the CFI.

Finance module

The finance module in CAMS consists of the following sections:

- Cost of individual items
- Construction or renovation floor plans (if applicable)
- Contributions from eligible partners
- Infrastructure utilization
- Overview of infrastructure project funding (generated automatically).

Consult the <u>Getting started with CAMS documents</u> for researchers and institutional administrators for more information.

Suggested reviewers module

CAMS automatically populates the suggested reviewers module with information provided in the notice of intent.

CVs

CAMS will append the CV of each team member to the proposal when you submit it. Make sure CVs are up to date before you submit your proposal.

The "List of published contributions" section of the CV, renamed "Most significant contributions," now allows you to include a wide range of research outputs and impacts not limited to published contributions.



Part 3 – Criterion standards and instructions

Objective 1

Enable internationally competitive research or technology development through the equitable participation of expert team members

Assessment criteria under this objective are:

- · Research or technology development
- Team expertise
- Team composition

Research or technology development

Criterion standard: The research or technology development program(s) are innovative, feasible and internationally competitive.

Proposal instructions:

- Describe the proposed research or technology development program(s) that will be enabled by the requested infrastructure.
- Explain the methodologies to be employed and discuss feasibility by identifying key challenges and how the team will overcome them.
- Describe the innovative aspects of the program(s) by positioning it within the current state of knowledge in the field, both in Canada and internationally (include references).



Consider providing a list of the major infrastructure items that are requested before providing details about the research program(s).



For core facilities (see "What is a "core" facility?"), consider providing a high-level description of the types of projects the infrastructure will enable, then describe in more detail a representative sample of the research projects to be conducted.

Team expertise

Criterion standard: The team comprises the breadth of experience and expertise needed to conduct the proposed research program(s).

Proposal instructions:

- Describe the expertise required to conduct the proposed research program(s).
- Highlight the team members' experience and expertise through traditional and/or non-traditional research outputs. (See "What are traditional and non-traditional research outputs?").



Consider providing a competency matrix matching the team members' expertise with the proposed research activities.

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What is a "core" facility?

A core facility provides access to the following, which are generally too expensive, complex or specialized for researchers to cost-effectively provide and sustain themselves:

- State-of-the-art research services and analyses
- · Instruments and technology
- Expertise
- Training and education.

A core facility also:

 Is broadly available to many researchers to conduct their research activities, irrespective of their administrative affiliation and with no requirement for collaboration or co-authorship

- Has dedicated equipment and space serving one or more institutions
- Is recognized and supported by the research institution where it is located
- Has a clearly defined governance and management structure and a sound management plan reflective of its mandate, breadth and complexity
- Has dedicated management involving individual(s) with the technical and subject matter expertise necessary to oversee all aspects of the facility.



What are traditional and non-traditional research outputs?

The CFI merit-review process takes into account traditional and non-traditional research outputs to assess researchers' experience and expertise. (See "Assessing expertise more inclusively through non-traditional research outputs.") For example:

- Publishing research articles
- Reporting new knowledge or data (such as presenting at conferences and other venues)
- Developing new technologies
- Producing software

- Creating intellectual property
- · Contributing to policy or business decisions
- Training highly qualified personnel
- Conducting community engagement and outreach activities
- Producing community products such as Indigenous scholarly works, cultural sensitivity training, etc.
- Discussing an article, book, presentation or other research on social media, podcasts and blogs
- Curating public exhibitions and events.

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Team composition

Criterion standard: Principles of equity and diversity were considered in the team composition including in its leadership. There is a commitment to create an inclusive environment where all team members are fully integrated and supported in the research team.

Proposal instructions:

- Describe the specific challenges or systemic barriers (see "How are systemic barriers defined?") that exist in the context of your research program(s) that could prevent individuals from underrepresented groups from participating equitably within the team.
- Describe at least one concrete practice that you put in place to overcome the challenges or systemic barriers you have described and which demonstrates that equity and diversity were intentionally considered in the team composition.
- Describe at least one concrete practice that you
 will adopt to facilitate the ongoing inclusion of
 underrepresented groups in the research team, and
 how you will implement that best practice given the
 challenges or systemic barriers you have described.

Consult the Government of Canada's <u>Best Practices in Equity</u>, <u>Diversity and Inclusion in Research</u> guide for examples of how to integrate these principles into your research. We also recommend reviewing your institution's action plan and policies for equity, diversity and inclusion.



How an individual self-identifies in terms of belonging to one or more underrepresented groups is considered personal information. Do not in any way provide the personal information of team members (e.g., Dr. X identifies as a member of a visible minority; The team has X women, X men and X individuals who identify as persons with disabilities; etc.).



How are systemic barriers defined?

Systemic barriers are defined as policies or practices that result in some individuals from underrepresented groups receiving unequal access to or being excluded from participation in employment, services or programs. Underrepresented groups can include, but are not limited to, women, Indigenous Peoples, persons with disabilities, members of visible minorities/racialized groups, members of LGBTQ2+ communities and early-career researchers.

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Objective 2

Enhance and optimize the capacity of institutions and research communities to conduct the proposed research or technology development program(s) over the useful life of the infrastructure

Assessment criteria under this objective are:

- Infrastructure
- Sustainability

Infrastructure

Criterion standard: The requested infrastructure is necessary and appropriate to conduct the proposed research program(s) and optimally enhances existing capacity.

Proposal instructions:

- Describe each requested item, including cutting-edge or workhorse equipment as well as upgrades to
 existing equipment, and justify why it is needed (including if it would replace existing capacity). If possible,
 refer to specific methodologies highlighted in the "Research or technology development" section.
- Explain how the requested infrastructure enhances and integrates with the existing infrastructure capacity at your institution and at your partners' institution(s).



Consider providing a matrix matching the requested infrastructure with the proposed research activities.

Sustainability

Criterion standard: The infrastructure will be optimally used and maintained over its useful life through tangible commitments.

Proposal instructions:

- Present a management plan which:
 - Describes how the infrastructure will be optimally used (e.g., user access and level of use)
 - Describes how the infrastructure will be operated and maintained over its useful life
 - Outlines the operating and maintenance costs and revenue sources over the useful life of the infrastructure. Refer to the "Financial resources for operation and maintenance" tables in the project module.
- For larger and more complex projects, describe the proposed governance of the requested infrastructure, including the composition of its decision-making bodies.

For a multi-institutional proposal that requests an additional management and governance contribution, include a justification for this contribution. (See "Is there additional funding for multi-institutional projects?")



If the infrastructure will generate a significant amount of data, include a description of how this data will be managed.

Objective 3

Lead to social, health, environmental and/or economic benefits for Canadians

Assessment criterion under this objective is:

Benefits

Benefits

Criterion standard: The team and its partners have a well-defined plan to transfer the results of the research or technology development program(s). The results are likely to lead to social, economic, health or environmental benefits for Canadians.

Proposal instructions:

- Describe the team's plans to transfer the results of the research or technology development program(s).
- Describe the team's experience in knowledge mobilization and/or technology transfer.
- Describe the potential benefits to Canadians, including the skills highly qualified personnel will develop through using the requested infrastructure.



In addition to more common benefits, some other examples include: increased participation of underrepresented groups (including those who may face systemic barriers (see "How are systemic barriers defined?")), increased scientific literacy among the public, public engagement, partnerships outside of academia, published datasets.

INNOVATION

Appendix 1 – Summary of changes and improvements to the Innovation Fund since the 2020 competition

Equity, diversity and inclusion (EDI)

We developed an equity, diversity and inclusion strategy for the 2023 competition in consultation with stakeholders across Canada and based on the approach of the Tri-agency Institutional Programs Secretariat's New Frontiers in Research Fund.

See "Our equity, diversity and inclusion strategy for this competition."

Assessment criteria

We eliminated the "Research capacity" criterion. Those aspects are now included under other criteria.

We also revised the "Team" criterion so that the team is now assessed under two separate criteria:

- Team expertise, focusing on the expertise and experience of the team members
- Team composition, focusing on EDI considerations.

See "What are the assessment criteria?"

Competition objectives

We updated objective 1 to include equity, diversity and inclusion considerations.

We also reworded objective 2 to highlight sustainability considerations.

See "Objectives of this competition."

Institutional envelopes

Using the most recent available data, we increased the minimum for the institutional envelopes from \$1.75 million to \$2 million.

See "Institutional envelopes."

Research security

We incorporated language to address national security guidelines and research security.

See "Security considerations."

Review process

We will maintain the following changes, which were introduced for the 2020 competition:

- Only proposals that meet the competition's threshold of excellence (the same threshold as the 2020 competition) at the Expert Committee stage will advance in the competition. (See "What is the threshold of excellence?")
- Face-to-face meetings between applicants and reviewers will not take place
- Expert Committees and Multidisciplinary Assessment Committees (MACs) will be held virtually.

We will also include members on each of the MACs who are well-versed in principles of equity, diversity and inclusion and who will be charged with identifying proposals with significant weaknesses in the "Team composition" criterion. These proposals will be removed from the competition.

See "Review process."

Proposal page limit

We have reduced the page limit for smaller projects to lessen the burden on both applicants and reviewers.

We will also allow more pages for applications written in French. This provision is in support of evidence demonstrating that documents written in French require approximately 20 percent more space than similar documents in English, and will ensure an equitable amount of space for applications written in either official language.

See "Page limits."

INNOVATION

2023 Innovation Fund

Appendix 2 – Institutional envelopes

Institution	Envelope
University of Toronto	\$179,000,000
The University of British Columbia	\$99,900,000
McGill University	\$94,900,000
University of Alberta	\$60,800,000
Université de Montréal	\$58,200,000
University of Calgary	\$49,200,000
University of Ottawa	\$48,100,000
Université Laval	\$46,700,000
McMaster University	\$45,800,000
The University of Western Ontario	\$38,900,000
University of Waterloo	\$36,400,000
University of Manitoba	\$25,400,000
Dalhousie University	\$24,300,000
Queen's University	\$23,800,000
Simon Fraser University	\$22,400,000
Université de Sherbrooke	\$22,000,000
University of Guelph	\$16,700,000
University of Saskatchewan	\$16,700,000
University of Victoria	\$15,700,000
York University	\$15,600,000
Concordia University	\$14,200,000
Université du Québec à Montréal	\$14,100,000
Carleton University	\$12,700,000
Polytechnique Montréal	\$12,600,000

Institution	Envelope
Memorial University*	\$10,100,000
Institut national de la recherche scientifique*	\$9,200,000
Ryerson University*	\$9,000,000
University of Windsor*	\$6,100,000
École de technologie supérieure*	\$5,900,000
University of New Brunswick*	\$5,300,000
Wilfrid Laurier University*	\$4,300,000
University of Regina*	\$4,000,000
Brock University*	\$3,500,000
Laurentian University*	\$3,400,000
Université du Québec à Trois-Rivières*	\$3,300,000
University of Lethbridge*	\$3,000,000
Ontario Tech University*	\$2,900,000
Lakehead University*	\$2,900,000
Trent University*	\$2,500,000
Université du Québec à Chicoutimi*	\$2,400,000
The University of Winnipeg*	\$2,300,000
Université du Québec à Rimouski*	\$2,100,000
HEC Montréal*	\$2,100,000
All other CFI-eligible institutions	\$2,000,000

^{*} Small institution (See "How are small institutions defined?")