

CANADA FOUNDATION FOR INNOVATION

2023 Innovation Fund competition

Guidelines for Multidisciplinary
Assessment Committees

July 2022

INNOVATION

Canada Foundation
for Innovation

Fondation canadienne
pour l'innovation



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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



Who should use these guidelines?

These guidelines are for members of Multidisciplinary Assessment Committees (MACs) assessing proposals for the Canada Foundation for Innovation's 2023 Innovation Fund competition.



A word of thanks

The Canada Foundation for Innovation (CFI) would like to thank you for agreeing to participate in the review process for the 2023 Innovation Fund competition. The review process relies on dedicated people like you who generously lend their time and expertise to its success. The CFI and Canada's research community greatly appreciate your efforts.

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.

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

Review process

Through our structured merit-review process, we ensure that proposals are reviewed in a fair, competitive, transparent and in-depth manner. This process relies on independent reviewers from across Canada and around the world to ensure the best projects receive funding. The reviewers' time and effort are invaluable to help the CFI's Board of Directors make funding decisions.

For Innovation Fund competitions, we use a three-stage merit-review process: review of proposals by Expert Committees, followed by MACs, followed by a Special Multidisciplinary Assessment Committee (S-MAC) (see [Figure 1: The Innovation Fund merit-review process](#)).



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 contributes 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.

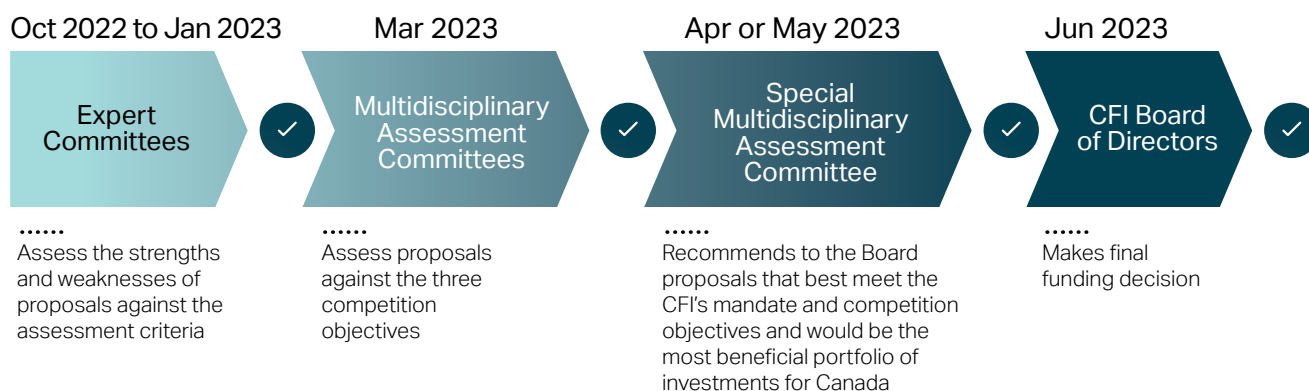
Diversity: We value attributes that allow institutions and their researchers — from any background and from anywhere — to succeed. This includes individual attributes such as gender, language, culture and career stage; institutional attributes

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.

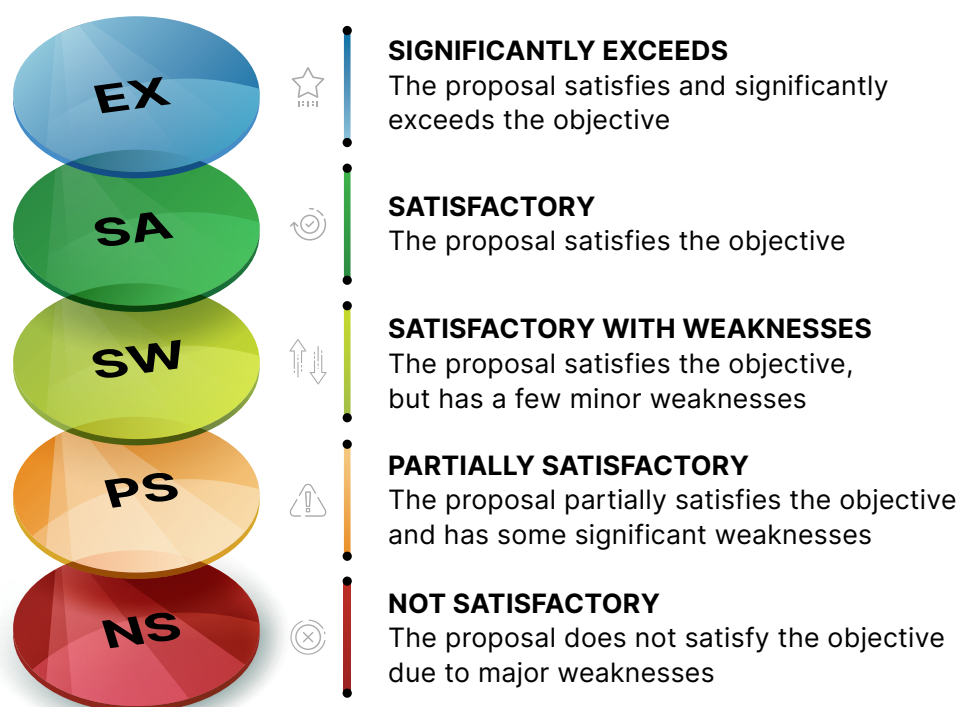
Figure 1: The Innovation Fund merit-review process



Rating scale

We use a five-point rating scale with statements about the degree to which a proposal meets each criterion standard (Figure 2). Your rating must be supported by the proposal's strengths and weaknesses based on the objective standard. We encourage you to use the full range of ratings to assess proposals, both in your preliminary assessment and when the MAC reaches a consensus on the ratings.

Figure 2: Rating scale



A rating of “SA” indicates that the proposal clearly meets the competition objective and addresses all the instructions for that objective.

Where a proposal clearly meets the competition objective and its associated assessment criteria **AND** exhibits qualities or strengths that exceed what is required, you can assign a rating of “EX.”

Stage 1: Expert Committees

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 moved the next stage. (See [“What is the threshold of excellence?”](#))

Stage 2: Multidisciplinary Assessment Committees

The MACs assess the proposals that meet the threshold of excellence at the Expert Committees stage. Each MAC reviews groups of proposals of comparable size and/or complexity and assesses them against the three competition objectives.

One or more MACs exclusively review proposals submitted by small institutions.

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

- Identifying proposals that demonstrate the highest standard of excellence and best meet the three competition objectives relative to other competing requests
- Identifying proposals with significant weaknesses in the “Team composition” criterion. This criterion informs the assessment of Objective 1 (“Enable internationally competitive research or technology development through the equitable participation of expert team members”). These proposals will be removed from the competition
- Providing a funding recommendation and funding amount for each proposal for the next stage of review

Stage 3: 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.

Funding decisions

The CFI Board of Directors will make funding decisions for this competition at its June 2023 meeting. Following this meeting, applicants will receive the funding decisions and the Expert Committee and MAC reports.

Principles of merit review

Our merit-review process is governed by the underlying principles of integrity and confidentiality. This is to ensure that we continue to have the trust and confidence of the research community, the government and the public. All MAC members must follow our [Conflict of interest and confidentiality agreement](#).



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 meet the threshold of excellence unless they receive three or more ratings of

PS or **NS**

For all other institutions — Proposals meet the threshold of excellence unless they receive either of the following:

- Three or more ratings of

PS or **NS**; or,

- Four or more ratings of

SW, **PS** or **NS**

See “[Figure 2: Rating scale](#)”



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.

Integrity

We expect MAC members to maintain the highest standards of ethics and integrity. This means that personal interests must never influence, or be seen to influence, the outcome. You are appointed as an individual, not as an advocate or representative of your discipline(s) or organization. If you have a conflict of interest, you should declare it to the CFI. We will determine if the conflict of interest is manageable or if we must withdraw your invitation to be a reviewer.

Confidentiality

Our review process is confidential. When you agree to review for the CFI, you are bound by our [confidentiality agreement](#). This means that everything we send you is confidential and must be treated as such at all times. You must not discuss or share proposals with anyone. If you do not think you have the expertise to provide a useful review without discussing it with a colleague, you should decline the invitation.

Avoiding bias

Merit review is subjective by nature. Bias can be unconscious and show up in several ways. It could be based on:

- A school of thought or ideas about fundamental versus applied or translational research, areas of research, sub-disciplines or approaches (including emerging ones)
- The size or reputation of a participating institution
- The age, language, identity factors or gender of the applicant.

We strongly encourage you to complete the [Bias in Peer Review training module](#) developed by the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council of Canada and the Social Sciences and Humanities Research Council. This short, online module promotes understanding of bias, how it can affect merit review and ways to mitigate bias. (See "[The CFI's commitment to equity, diversity and inclusion](#).")

Official languages

The CFI offers its services in both of Canada's official languages — French and English. Committees must ensure that all proposals in either official language receive a full and detailed review. If you have been assigned a proposal in a language that you cannot understand, contact us immediately and we will reassign the proposal to another reviewer. We normally conduct committee meetings in English.

Part 2 – How to conduct your review

Assessing proposals against the competition objectives

MACs will assess proposals against the three competition objectives (see [Objectives of this competition](#)). The Expert Committees assessed the proposals against the criterion standards for six assessment criteria. The assessment criteria inform the objectives (see “[Table 1 – Relationship between competition objectives and assessment criteria](#).”)

In the [call for proposals](#), we instructed applicants to clearly present how their project meets each criterion standard and competition objective and to provide enough information for you to evaluate the project’s merits.

Assessing proposals using the rating scale

To assess proposals, use the rating scale shown in Figure 2 of this document, and repeated here for quick reference.

Figure 2: Rating scale

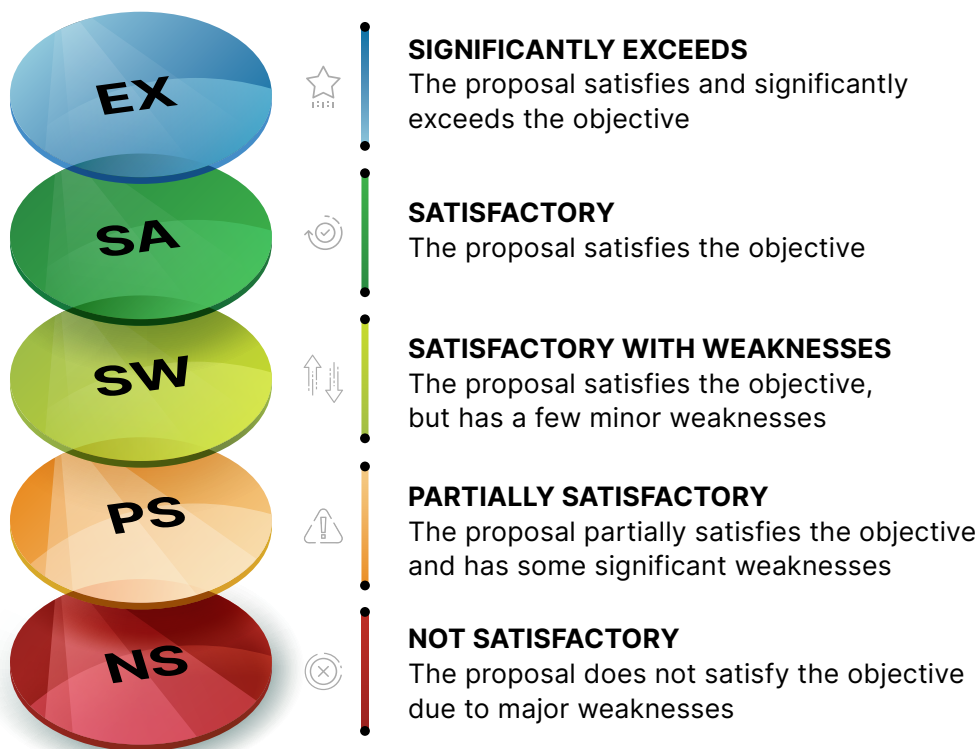


Table 1: Relationship between competition objectives and assessment criteria

Competition objectives (reviewed by the MAC)	Assessment criteria (Reviewed by an Expert Committee)	Assessment criteria standards
Enable internationally competitive research or technology development through the equitable participation of expert team members	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. Projects with significant weaknesses in this criterion cannot be recommended for funding and are to be removed from the competition at the MAC stage. See Assessment of “Team composition” criterion below for details.
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	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.
Lead to social, health, environmental and/or economic benefits for Canadians	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.

Assessment of “Team composition” criterion

The MAC will evaluate proposals based on the three competition objectives **except** in cases where the Expert Committees gave a rating of PS (partially satisfied) or NS (not satisfied) for the “Team composition” criterion, indicating significant weaknesses.

The MAC meeting will begin with a review of those proposals, which the CFI will identify for the committee ahead of time. You will be asked to decide whether each of these proposals has significant weaknesses for the “Team composition” criterion, based on the information provided in the proposal, the Expert Committee's comments, and as compared with other proposals under review by your MAC.

Should the MAC deem that a proposal fails to adequately address (i.e., there are major weaknesses) the “Team composition” criterion standard, the MAC will not assess the proposal and it will be removed from the competition. The MAC will be asked to provide a rationale for these decisions that will comprise the MAC report for the proposals removed from the competition.

Tools to conduct your review

Use the [CFI Awards Management System \(CAMS\)](#) to access the documents and information you need to conduct your review. We will create a CAMS account for you once you have accepted to participate in the review process. If you already have a CAMS account, you can use it to access the review materials for this competition.

CAMS is divided into dashboards for different types of users. The “Reviewer” dashboard is where you will access the review materials and conduct your preliminary assessments. To access the review materials, click on the committee name. This will bring you to the “Review and documentation” page, where you will find:

- Reference materials
- Meeting information
- Proposals
- Preliminary assessment form (under the “Your review” tab).

Consult [Getting started with CAMS: A guide for reviewers](#) for more information on using CAMS.

Multidisciplinary Assessment Committee roles and responsibilities

Chairs

The Chair is responsible for leading the MAC meeting, ensuring that it runs effectively and that the committee:

- Considers the views of all members
- Reviews all proposals fairly, consistently and according to the guidelines in this document
- Discusses each proposal in sufficient detail
- Achieves a consensus rating for each objective
- Sufficiently substantiates the ratings so CFI staff can prepare the draft committee report.

The Chair is also responsible for ensuring that the MAC report for each proposal accurately reflects the discussion at the meeting.

Members

MAC members have a broad understanding of the research environment, the niches of excellence in institutions and the breadth of outcomes and impacts of research across the entire landscape of research activity.

Each MAC will review approximately 20 proposals in total, with subsets of proposals assigned to each MAC member for in-depth review. Members will be asked to submit preliminary ratings, for the projects assigned to them for in depth review, before the committee meets.

CFI staff

At least two CFI staff members attend the MAC meeting to assist the Chair, take notes and clarify CFI policies and processes. CFI staff draft committee reports for each proposal. The committee Chair will review and approve these reports to ensure they accurately reflect the committee’s discussion.

Observers

Sometimes, additional CFI staff observe committee meetings.

Meeting logistics

MACs will meet by videoconference for **two five-hour sessions during the week of March 27 to 31, 2023**. We will provide instructions for connecting to the videoconferencing platform in advance of the meetings.

Table 2: Summary of key activities for Multidisciplinary Assessment Committees

Timing	Activities
Before the meeting (January to March 2023)	<p>Committee members:</p> <ul style="list-style-type: none">• Activate their account and log in to the CFI Awards Management System (CAMS)• Inform the CFI of any potential conflict of interest• Complete the recommended Bias in Peer Review training module (See "Avoiding bias")• Access the review materials on the "Reviewer" dashboard• Participate in member briefing by videoconference• Evaluate the proposals against the competition objectives• Provide a preliminary assessment in CAMS at least three days before the meeting.
At the meeting (2 sessions between March 28-31, 2023)	<p>The Chair guides the committee in reviewing each proposal in turn.</p> <p>The committee discusses the proposal against each objective to reach a consensus on a rating. This discussion informs the MAC report.</p>
After the meeting (April 2023)	<p>CFI staff draft the MAC report for each proposal. The Chair reviews and approves the reports.</p>

Steps in the Multidisciplinary Assessment Committee review

Step 1 – Before the meeting

We will prepare coaching opportunities and additional material for how to review a proposal that may include group briefing sessions and explainer videos. Access to these will be communicated to you by email.

Access the review materials

You will receive an email to activate your account on the [CFI Awards Management System \(CAMS\)](#). If you already have an account, you will receive an email to notify you when the review materials are available in CAMS. Consult [Getting started with CAMS: A guide for reviewers](#) for more information on using CAMS.

Conduct your preliminary assessment

The materials provided must be the sole information source upon which you base your review. Applicants had to demonstrate in the proposal how the project satisfies each competition objective and justify the need for the requested funding.

Each MAC will review approximately 20 proposals. For each of the proposals, three committee members will be designated as lead reviewers and will be required to conduct a more in-depth review. You will each be assigned approximately 10 proposals in this capacity, some of which will be outside of your general area of expertise as this encourages diverse points of view. To fully engage in the discussions, you are

expected to read all of the proposals assigned to your MAC (or at least the three-page project summary for the proposals for which you are not a lead reviewer) and their associated Expert Committee reports.

Proposals for which you are a lead reviewer are identified on the "Your review" tab on the "Review and documentation" page in CAMS. You are required to enter your ratings in CAMS only for those proposals assigned to you.

After reading each proposal, you will:

- Identify the proposal's strengths and weaknesses based on the competition objectives
- Use the five-point rating scale to assess the degree to which the proposal meets each competition objective
- In CAMS, select your rating for each objective from a drop-down menu. You are not required to provide written comments before the meeting. However, you should keep your notes for discussion at the meeting.
- Complete your preliminary assessments **at least three days before the committee meeting.**

Pre-meeting briefing

We will maintain regular contact with MAC members, by email or telephone, before the meeting to ensure you have the necessary information to conduct your review.

Once all members have activated and accessed their CAMS account, CFI staff will schedule briefing sessions with members to go over the review process. The one-hour briefing session will take place in January 2023 and several sessions will be offered to accommodate a maximum of members.

Step 2 – At the meeting

The MAC discusses each proposal in turn for approximately 25 minutes. The three MAC members assigned as lead reviewers to the proposal will share their preliminary assessments of the proposal first. For each proposal that has been assigned to you for review, be prepared to provide a brief overview of its strengths and weaknesses based on the objectives. The discussion is moderated by the committee Chair.

A general discussion will follow, focusing on the objectives where there are significant discrepancies among the assigned members' assessments. The discussion proceeds as follows:

- The lead reviewer provides a brief overview of the proposal, their ratings and a brief rationale that highlights the proposal's strengths and weaknesses for each on the three competition objectives.
- The Chair invites other assigned reviewers to provide their rating and any additional information or differing viewpoints.
- The Chair opens the discussion to the rest of the committee members.
- The Chair asks the committee to reach a consensus for the rating for the objective before moving to the next objective.
 - The committee must assign one of five ratings (see [Figure 2: Rating scale](#)) for each objective.
 - The rating assigned should accurately reflect the proposal's strengths and weaknesses identified during the discussion for each objective. **Where there are discrepancies between the MAC's assessment and comments in the Expert Committee report, a substantive explanation will be required.**
- The Chair asks the committee to identify if a proposal has significant weaknesses in the "Team composition" criteria, which informs objective 1, which is to enable internationally competitive research or technology development through the equitable participation of expert team members. If significant weaknesses are identified by the MAC, the proposal will not be considered for funding and will be removed from the competition.
- The Chair asks the committee to agree on a funding recommendation for each proposal. Each MAC will also be able to identify up to two proposals of exceptional merit.

Step 3 – After the meeting

Committee reports

MAC members are not required to draft committee reports. CFI staff draft a report for each proposal that summarizes the committee's consensus ratings and comments. MAC reports do not list the committee membership.

The reports for proposals recommended by the MAC will be forwarded to the S-MAC to assist it in its evaluation of the proposals.