



Major Science Initiatives Fund competition 2017–2022

Call for Proposals

October 2015

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COMPETITION DESCRIPTION

Background

Since its inception in 1997, the Canada Foundation for Innovation (CFI) has supported the creation of a select number of key national research facilities facing particular challenges in terms of their operations and maintenance, management and governance. Owned by one or more institutions, these world-class facilities serve communities of researchers from across the country and internationally. Such facilities are increasingly complex and international in scope and require robust governance, management and stewardship mechanisms to ensure that they are funded, managed and operated for success, and ultimately contribute to the Canadian economy and society-at-large.

In 2010, the CFI was mandated to design a systematic approach for evaluating and addressing the operating and maintenance (O&M) funding needs of such national research facilities as well as their scientific performance, and to ensure they have in place robust management and governance policies and practices. The CFI created a funding mechanism called the Major Science Initiatives (MSI) Fund. Held in 2012, the first competition under this new mechanism sought to support large-scale research facilities that had received a one-time contribution of at least \$25 million in infrastructure funding from the CFI. For the 2014 special competition, eligibility was broadened and a special competition was launched to include a greater range of national facilities, both in size and complexity, across all research disciplines.

Through this 2017-2022 competition, the CFI will continue to contribute to the ongoing O&M needs of national research facilities for which the loss or absence of support would represent a serious setback for Canada. As with the 2014 special competition, facilities are not required to have previously received CFI infrastructure funding to apply. Funding awarded under this competition is intended to secure and strengthen these facilities to ensure that Canadian researchers can undertake world-class research and technology development that leads to social, health, economic, or environmental benefits to Canadians.

Funding provided by the CFI will complement existing O&M resources to address the operational needs of the successful national research facilities. It is expected that current O&M funding partners will continue their support.

Objectives

This competition will provide multi-year support towards the O&M needs of national research facilities for the period April 1, 2017 to March 31, 2022. CFI support through this competition is intended to:

- Secure and strengthen state-of-the-art national research facilities that enable Canadian researchers to undertake world-class research and technology development that leads to social, health, economic, or environmental benefits to Canadians;
- Enable funded facilities to operate at an optimal level and to have their scientific and technical capabilities fully exploited; and,
- Promote the adoption of best practices in governance and management, including long-term strategic and operational planning in keeping with the scale and complexity of the facility.

National research facility definition

For the purposes of this competition, a national research facility is defined as one that addresses the needs of a **community of Canadian researchers representing a critical mass**

of users distributed across the country¹ by providing shared access to substantial and advanced specialized equipment, services, resources, and scientific and technical personnel. The facility supports leading-edge research and technology development, and promotes the mobilization of knowledge and transfer of technology to society. A national research facility requires resource commitments well beyond the capacity of any one institution. A national research facility, whether single-sited, distributed or virtual, is specifically identified or recognized as serving pan-Canadian needs and its governance and management structures reflect this mandate.

Competition timeline

Dates	Activities
December 21, 2015	Notice of Intent submission deadline
February 4, 2016	Invitation to submit proposals
April 21, 2016	Proposals submission deadline
May–July 2016	Expert committee meetings
August 2016	Multidisciplinary Assessment Committee
September 2016	Board of Directors meeting – funding decision

FUNDS AVAILABLE

The CFI will invest up to \$400 million over five years (2017–18 to 2021–22) to cover a portion of the total eligible O&M costs of funded facilities. The total CFI funding, including Infrastructure Operating Funds (IOF) for those facilities that are partially funded by the CFI, must not exceed 40 percent of a facility’s total eligible O&M costs. The CFI may reserve a portion of the \$400 million for transitional funding and potential adjustments of awards following the mid-term review process.

Facilities currently receiving MSI funding

Facilities currently holding an MSI award, either from the 2012 or 2014 competition, will not automatically be deemed eligible for this competition.

In the event that facilities currently receiving significant MSI funding from the CFI (more than \$2 million annually) are not invited at the NOI stage to submit proposals or are not funded in this competition, the CFI may provide transitional funding to assist these facilities going forward. If a facility is not invited to submit a proposal following the review of the NOI, the CFI will follow up with the applicant to determine whether transitional funding is required. If this is the case, the applicant will be given guidelines on how to submit a request.

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¹ Typically referred to as a pan-Canadian user community

These facilities will be permitted to make a one-time request for transitional funding that may be used over a maximum of two years (2017–18 and 2018–19) and may not exceed a total of 75 percent of its current annual CFI funding (e.g. the facility may plan on using the full 75 percent in a single year, or 50 percent in the first year and 25 percent in the second year). This information will be reviewed by the Multidisciplinary Assessment Committee (MAC), at the August 2016 meeting, which will make a funding recommendation to the CFI Board of Directors.

Partner funding sources

Support from the CFI is intended to complement the existing funding sources in order to meet the objectives of this competition. It is, therefore, expected that current funding partners will remain involved. As such, the use of CFI funds to displace or substitute existing sources of O&M funding is not permitted. The CFI encourages institutions to work with current and potential funding partners at an early stage in the planning and development of the proposal.

ELIGIBILITY

Eligible facilities

The CFI will accept proposals that seek support for O&M costs for facilities meeting all of the following eligibility criteria:

1. The facility enables research by providing an environment encompassing highly specialized equipment, services, resources, and scientific and technical personnel. No alternatives exist in Canada.
2. The facility is fully operational and is owned by one or more CFI-eligible institutions.
3. There is demonstrated demand by the Canadian research community for the equipment, services, resources, and scientific and technical personnel offered by the facility. This community represents a critical mass of users distributed across the country, in areas of research strength for Canada.
4. The facility has an established user access policy that is publicly available such that any interested potential user is able to request access to the facility.
5. The facility has demonstrated annual eligible O&M costs exceeding \$500,000 to support significant human and operational resources beyond what is standard in Canadian research institutions.
6. The facility has as an established governance model appropriate to the size and complexity of the facility, with a clearly defined mandate, structure and procedures to address:
 - Accountability, legal duties and responsibilities
 - Financial controls
 - Policy formulation and strategic planning including stakeholder communications
 - Oversight of facility performance

7. The facility has a management structure and practices appropriate to the size and complexity of the facility to address:
- Operation and maintenance of the facility
 - Human resources and succession planning
 - Risks and risk mitigation
 - Monitoring of performance

However, the following are not eligible in this competition:

- Thematic institutes, memberships and TRIUMF; and.
- Facilities that are the responsibility of, or are included within the mandate of, a federal agency (e.g. astronomy facilities, National Research Universal reactor at Chalk River).

Administrative institution

Proposals must be submitted by a CFI-eligible institution on behalf of the national research facility.

Eligible costs

Eligible costs are defined as the costs relating to the O&M of the national research facility. If a particular item is not clearly defined as eligible or non-eligible, the CFI will consider the request on a case-by-case basis.

- Salaries of non-academic managers, professionals, technicians, administrative personnel, and consultants directly involved in the governance, management, operation and maintenance of the facility who provide services which benefit the pan-Canadian user community
- Audit fees
- Training for the main operator(s) of the research infrastructure. It is expected that the main operator(s) will train other users. Alternatively, a group training session may be provided by the vendor at the institution.
- Board of Director and governance committee meetings and related travel
- Communication/outreach activities
- Extended warranties and/or service contracts and extensions to warranty coverage and software upgrades
- Maintenance and repairs
- Replacement parts and replacement of an item needing repair if the replacement is more cost-effective than the repair (the replacement item must have similar functionality)
- Minor upgrades to maintain the operational capacity of the facility
- Insurance directly related to the facility
- Services that directly support the facility (e.g. electricity, security, cleaning, telephone, internet)
- Regulatory requirements compliance costs

- Supplies and consumables required to keep the facility in a state of readiness for research, independent of the number of researchers actually using the resource and not associated with specific research projects

Non-eligible costs

The following costs are not eligible:

- Equipment and construction/renovation costs
- Buying or leasing of real property
- Trainee stipends (undergraduates, graduates and post-doctoral fellows) and faculty members' salaries
- Administrative personnel not directly related to the governance, management, operation and maintenance of the facility (e.g. institutional research office, library and finance services)
- Any cost to conduct research activities
- Expenses related to intellectual property
- Costs not directly related to the facility

Eligible partner funding

Any partner may contribute to the facility's eligible O&M costs, including the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council of Canada, the Social Sciences and Humanities Research Council, departments and agencies of the federal, provincial, territorial and municipal governments, firms and corporations, institutions and other users (e.g. through user fees), and international sources of funding.

APPLICATION PROCESS

Expression of Interest (completed)

The CFI invited applicant institutions who will act as the administrative institutions to submit Expressions of Interest to identify national research facilities for which they anticipate submitting a proposal to the CFI. Expressions of Interest included:

- Name of the facility
- Brief description of the facility (maximum 200 words)
- The website address of the facility
- Total annual operating budget of the facility (based on actual annual costs and revenues)
- Best estimate of the anticipated total amount to be requested from the CFI for the period April 1, 2017 through to March 31, 2022

Expressions of Interest were submitted to the CFI by email by October 14, 2015.

The Expressions of Interest were used by CFI staff to gauge the level of interest in this competition and to plan the competition.

Notice of Intent

This competition requires that the administrative institution submit a Notice of Intent (NOI) through the CFI Awards Management System (CAMS) no later than December 21, 2015. The NOI should clearly articulate how a facility meets all seven eligibility criteria.

Following receipt of the NOIs, an administrative review will be conducted by the CFI. Those facilities that are deemed ineligible at that stage will not be assessed further (e.g. facilities that are not owned by one or more CFI eligible institution or that have total annual operating costs of less than \$500,000).

The NOIs will be subject to a merit review by a MAC composed of experienced individuals with expertise in the governance, management and operation of national research facilities. The merit review will first identify those NOIs that meet all seven eligibility criteria of the MSI. Should the total request to the CFI for this subset of NOIs exceed \$600 million (or one and a half times the available competition budget), the MAC will identify from that group those facilities for which the loss or absence of support would represent the most serious setback for Canada, for a total CFI request not exceeding \$600 million. The recommendations from the MAC will be presented to the CFI's senior management for endorsement.

The NOIs will also be used by CFI staff to plan its merit review process and to start the recruitment of expert committee members who will review the proposals. The NOI budget will be used to determine the nature of the review process; therefore, the CFI expects that budgets presented in the NOIs will be realistic and robust estimates of the annual operating costs of the facilities that will be reflected in the proposals. A summary of operating budgets for the three previous years (2013–14 to 2015–16) must be included in the NOI.

Institutions will be advised by February 4, 2016 whether or not they will be invited to submit a proposal.

Proposal

Institutions invited to submit a proposal will manage the submission process through CAMS. Please note that institutions must use this secure portal to prepare and submit their proposals to the CFI.

The submission deadline for proposals is April 21, 2016.

MERIT REVIEW AND DECISION MAKING

Proposals will be assessed on the basis of the five assessment criteria outlined below. To be considered for funding, a proposal must satisfy all five criteria to a degree commensurate with the size and complexity of the facility.

Assessment criteria*Scientific excellence*

The facility is used by researchers and highly qualified personnel (HQP) of the highest calibre and enables innovative and leading-edge research that leads to social, health, economic, or environmental benefits to Canadians.

International competitiveness

The facility's highly specialized equipment, services, resources, and scientific and technical personnel are internationally-competitive and are a high priority for the user community.

Need for CFI funding

There is a demonstrated need for the requested funding to allow the facility's scientific and technical capabilities to be fully exploited and to operate at an optimal level to address the needs of the user community.

Excellence in governance

The facility adopts best practices in governance, including long-term strategic planning, as appropriate to its size and complexity. The facility defines its future needs in consultation with the user community.

Excellence in management and operations

To realize the strategic objectives, the facility is effectively and efficiently operated and has established mechanisms to ensure optimal use by the user community.

Merit review process

The assessment process will be tailored to the nature and complexity of the proposal and will generally include two stages, as outlined below.

Expert committee review

In the first stage, expert committees will convene to assess each proposal in relation to the established assessment criteria for this competition. These committees will be tasked with recommending to the MAC those proposals that meet the standard of excellence for the competition and with recommending the amount that should be awarded to each proposal. Proposals not recommended for funding by the expert committees will not be considered by the MAC.

The CFI will endeavour to recruit expert committees that will review small groups of similar or related proposals. These committees will convene either by teleconference or in person and may include a face-to-face meeting with the applicants for larger and more complex proposals.

Multidisciplinary assessment review

The second stage involves assessment by a MAC of those proposals recommended by the expert committees. Members of the MAC will be chosen for their capacity to assess proposals based on the competition objectives and for their breadth of knowledge and experience in the governance, management and operation of national research facilities. To ensure that there is consistency in the review process, the MAC will include members that have also participated in the review of the NOIs.

Following a careful analysis of the results of the expert review, the MAC will be responsible for:

- Identifying proposals that best meet the competition objectives relative to other competing requests;

- Establishing the amount that should be awarded to each proposal, within the competition budget; and,
- Reviewing requests for transitional funding from facilities currently receiving MSI funding but that are not successful in the current competition at either the NOI, expert or MAC review stages.

The MAC will be tasked with providing the final funding recommendations and funding amounts to the CFI Board of Directors.

Collaboration with funding partners

To coordinate the review processes and avoid duplication of review efforts, the CFI may provide committee reports, along with the names and affiliations of committee members, to relevant funding partners named in the proposal. In addition, representatives from the relevant funding partners will be invited, where appropriate, to participate as observers in the expert review process.

The CFI encourages institutions to work with all current and potential federal, provincial and territorial funding authorities and other funding partners at an early stage in the planning and development of proposals.

Funding decisions

Funding decisions will be made by the CFI Board of Directors at its September 2016 meeting. Following this meeting, the review materials for each proposal will be provided to the administrative institution.

PUBLIC ANNOUNCEMENT

The CFI makes national funding announcements related to its funding. In most cases, these announcements are organized in collaboration with the administrative institutions and the national research facilities. Public announcements provide institutions, facilities, their researchers and partners, government representatives, the media, and the CFI with opportunities to highlight the research and technology development in their communities. Following each national CFI funding announcement, institutions are encouraged to work with local and national media to promote the benefits and impacts of this research and technology development to Canadians. The results of the competition will remain confidential until after the national funding announcement.

OVERSIGHT AND MONITORING

The CFI has established an oversight framework which will guide the monitoring activities of the funded facilities. Potential applicants are strongly encouraged to read the [MSI Oversight Framework \(2015\)](#) prior to submitting an NOI to the current competition.

Oversight activities will be tailored to the complexity of the facility and will include:

- Financial and progress reports, including short- and medium-term outputs and outcomes;
- Risk assessment and mitigation strategy;
- Performance monitoring strategy; and,
- Decommissioning plans.

Each facility funded in this competition will undergo an external merit review at the midpoint of the award cycle (2019–20). The MSI mid-term review will assess the facility's ability to maximize their scientific and technological capabilities as a result of the MSI funding. Accordingly, the mid-term review will provide an assessment of the overall impact of MSI funding on the scientific excellence of the research program(s), the research outcomes and impacts, and on the governance, management and operations. The future management plan and the need for O&M funds for the remaining period will also be assessed. The CFI contribution to the O&M costs for the remaining period will depend on the outcome of the mid-term review.

To reduce the administrative burden on institutions, the CFI will endeavour to coordinate financial and other oversight activities with the facilities' funding partners. This could include, for example, combining financial reporting requirements, audit activities and sharing of the audit results, as applicable, for each of the funders.



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