DRAFT CALL FOR PROPOSALS

2012
Leading Edge and New Initiatives
Funds Competition

June 2011

Canada Foundation for Innovation
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Competition description

Context
The CFI invests in state-of-the-art research infrastructure that allows institutions to capitalize on their areas of research strength by developing a critical mass of research capacity that is internationally competitive. The research enabled by CFI support creates the necessary conditions for sustainable, long-term economic growth, including the creation of spin-off ventures and the commercialization of discoveries, and supports improvements to society, quality of life, health, the environment and public policy.

CFI-funded infrastructure helps attract top researchers to Canadian institutions and contributes to Canada’s global research reputation. Today, institutions must keep this capacity at the leading edge in order to continue to perform world-class research and technology development. To support this objective, the CFI’s 2012 Leading Edge and New Initiatives Funds competition will invest in innovative infrastructure projects that sustain and enhance areas of activity in which the CFI has already invested and provide support to explore promising new research directions. It is important to note that previous CFI investments have facilitated the creation of research clusters that bring people and resources together across institutions, disciplines, sectors and regions to drive advances in research and technology development.

Challenge
For this competition, the CFI challenges institutions to develop projects that sustain and enhance the research and technology development capacity created by past CFI infrastructure investments. The CFI encourages institutions to make choices and set priorities that build on their distinct research and technology development advantages.

The CFI also challenges institutions to anticipate how research and technology development may evolve and to advance projects that allow them to seize opportunities in breakthrough research or technology development activities.

CFI support through the 2012 LEF/NIF competition is intended to:
- enable researchers to undertake world-class research and technology development in areas of regional and national strength that lead to social, economic and environmental benefits for Canada, including private-sector innovation and commercialization;
- ensure the optimal use of research infrastructure within and among Canadian institutions;
- promote networking, collaboration and partnership among researchers, institutions and sectors as well as multidisciplinary approaches to research and technology development; and
- stimulate the training of highly qualified personnel.

This competition will fund innovative and transformative infrastructure projects covering the spectrum of research and technology development activities that have the potential lead to breakthroughs and advantages for Canadians. However, the focus of the
The competition will be to sustain and enhance the research and technology development capacity enabled through past CFI infrastructure investments at Canadian institutions. The previous investments made by the CFI may involve single or multiple awards that present an opportunity to advance the research or technology development capacity at the institution and to gain a competitive advantage.

The CFI expects that institutions will be selective in presenting exceptional proposals that position themselves as a global leader in the proposed area of research or technology development. The CFI also expects that institutions will submit only proposals that are consistent with their strategic research plans and reflect their institutional priorities. Institutions will be required to identify how they have and will continue to sustain their CFI-funded infrastructure and how they will support the projects being proposed for this competition (e.g., institutional resources committed to capitalize on the proposed infrastructure, the creation of new research positions or research chairs in these areas, etc.)

**Definitions**

**Leading Edge Fund (LEF)**
LEF proposals should support leading-edge research or technology development activities that:

- build on past investments the CFI has made at the applicant institution and are dependent upon the results and outcomes of these infrastructure projects;
- strengthen particularly successful and productive activities in areas of institutional strategic priority and enhance the institution's competitive advantage in these areas.

Institutions will be required to include in their LEF proposals a report on the productivity of the infrastructure previously funded by the CFI. The report must include evidence of the research or technology development results and outcomes facilitated by the infrastructure and an explanation of how new investment would support innovative new activities beyond those enabled by the existing resources. For proposals that align multiple infrastructure projects previously funded by the CFI, the report must outline the need to enhance and sustain the existing capacity in the area of research or technology development and demonstrate how new investment would enable even greater synergies among the previously funded projects.

**New Initiatives Fund (NIF)**
NIF proposals should support promising and innovative directions in research or technology development that:

- respond to an opportunity to participate in breakthrough research that aims to fundamentally change the current understanding of a concept of national or international importance, or to participate in the development of transformational technologies that will benefit Canadians;
- are in areas of institutional strategic priority;
- are not dependent on the results and outcomes of infrastructure projects previously funded by the CFI.
Critical dates

<table>
<thead>
<tr>
<th>Dates</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 15, 2011</td>
<td>Issue call for proposals</td>
</tr>
<tr>
<td>January 20, 2012</td>
<td>Deadline for the submission of notices of intent</td>
</tr>
<tr>
<td>April 26, 2012</td>
<td>Deadline for the submission of proposals</td>
</tr>
<tr>
<td>November 13, 2012</td>
<td>CFI Board decisions</td>
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</table>

Funds available

Competition budget
The CFI will invest up to $155 million in infrastructure costs for funded projects in this competition. To ensure that the competition focuses primarily on keeping previous CFI investments at the leading edge, at least two-thirds of the available budget will be awarded to meritorious LEF proposals.

The CFI will fund up to 40 percent of a project’s eligible infrastructure costs.

Operating and maintenance costs
The CFI will contribute to the operating and maintenance (O & M) costs of funded projects through its Infrastructure Operating Fund (IOF). The IOF allocated will be equivalent to 30 percent of the CFI contribution to the capital cost of projects funded under the LEF and NIF.

Institutions must demonstrate that sufficient O & M resources are, and will continue to be, available in order to capitalize on the full potential of the CFI-funded infrastructure. This O & M requirement is an integral part of the review process and may influence recommendations of the Multidisciplinary Assessment Committees (MAC).

Institutional envelopes
Given the limited resources available for this competition and the significant time and effort required by institutions to design major projects and prepare applications, institutional envelopes will place an upper limit on the total value of the funding that an eligible institution may request from the CFI for LEF and NIF proposals combined. Although at least two-thirds of the available budget will be awarded to meritorious LEF proposals, there is no pre-set allocation between the two funds to allow institutions maximum flexibility.

Eligibility

Institution eligibility
Canadian universities, colleges, research hospitals and non-profit research institutions that have been recognized as eligible by the CFI can apply. These institutions must
have submitted both a summary of their strategic research plan and a signed institutional agreement to the CFI before submitting a proposal to this competition.

** Eligible CFI projects for LEF proposals **

LEF proposals will build on past CFI investment(s) made through any previous CFI funding mechanisms. These previously funded projects will have been operational and functional for an appropriate period of time, as determined by the nature of the infrastructure and the area of research or technology development. In proposals that build on multiple previous investments, the previously awarded projects are expected to be in the same or related areas. The 2012 proposal will thus advance the research or technology development capacity at the institution and create an opportunity for the institution to gain a competitive advantage.

LEF proposals can build on either the infrastructure previously funded by the CFI, or on the results of the research or technology development activities performed using the infrastructure that was previously funded by the CFI.

** Eligible infrastructure **

An eligible infrastructure project involves the modernization, acquisition, development or leasing of research infrastructure. The eligible infrastructure represents a new capital asset and provides new and/or improved research capability, including research tools and/or research facilities.

Given the limited funds available and the focus on sustaining and enhancing previously funded infrastructure, construction costs to build new space will not be eligible in this competition. However, renovations, including fitting out existing space essential to house and use the infrastructure effectively will be eligible.

To be eligible for funding, in-kind contributions from external partners and cash expenditures by the institution must have taken place on or after April 1, 2011. Expenditures are considered incurred when goods are received, services have been rendered or work has been performed.

** High performance computing **

Although high performance computing (HPC) infrastructure may be requested in this competition, the CFI expects HPC infrastructure to be housed and managed by Compute Canada. Therefore institutions wishing to submit an HPC proposal must do so in collaboration with Compute Canada.

** Review and decision-making **

** Criteria **

The CFI will evaluate proposals on the basis of the three broad criteria that reflect the CFI’s mandate: research or technology development; benefits and impacts; and
capacity for innovation. To be considered for funding, a proposal must satisfy all three criteria to a degree commensurate with the size and complexity of the proposal.

1. Research or technology development
   • The research or technology development programs are world-class, innovative and potentially transformative.
   • The team has the necessary expertise and ability to lead the research or technology development programs.

2. Benefits to Canada
   • The research or technology development programs lead to benefits for society, health, the economy and/or the environment.
   • The highly qualified personnel involved in the project are offered unique training opportunities and acquire high-level skills for research and other careers.
   • Appropriate measures are in place to transfer the research results and outputs of the technology development to potential end users in a timely manner.

3. Capacity for innovation
   • The infrastructure is necessary and appropriate to conduct the research or technology development programs. It will be used in an optimal manner within and among Canadian institutions.
   • The infrastructure is effectively managed, operated and maintained for its useful life.
   • The research or technology development programs enhance the capacity of institutions to:
     • attract and retain the world’s top researchers and highly qualified personnel;
     • promote networking, collaboration and partnership among researchers, institutions and sectors, as well as multidisciplinary approaches to research and technology development;
     • contribute to national and/or regional strengths.

In addition, and in accordance with these criteria, LEF proposals will demonstrate how the research and technology development capacity, enabled through past CFI infrastructure investments, will be enhanced and sustained. Proposals will also demonstrate how these past investments have enabled the institutions and their researchers to gain a competitive advantage internationally. The LEF application will offer detailed information for assessing the results and outcomes of previous CFI investments.

In selecting proposals for the 2012 LEF/NIF competition, institutions should take into consideration the current capabilities at the institution, in their region and across the country, where appropriate, to ensure that the infrastructure is shared and its use is maximized. Institutions will be required to clearly demonstrate the unique and value-added nature of the proposed research infrastructure from a local, regional, national or international perspective.
Assessment process
The CFI will initially ensure proposals are eligible and complete, and may request additional essential material for review. The assessment of each proposal will be tailored to the nature and complexity of the proposal and will normally include three stages, outlined below.

Expert review
The first stage of review, the expert review process, is designed to assess the strengths and weaknesses of the proposals in relation to the evaluation criteria. Expert reviewers will also evaluate the performance reports (for LEF proposals). To assist the committee in assessing these reports, the CFI will provide information about the past CFI investments associated with the LEF projects in addition to general information about the project (e.g., title, project leader, etc.). The CFI may also provide additional information to the committees, such as total project costs, major pieces of acquired infrastructure, percentage of funds spent as of the most recent financial report, etc.

Wherever possible, expert committees will review small groups of similar or related proposals. Written external reviews may be used when an expert committee review is not possible, or where supplementary expertise is required.

Multidisciplinary Assessment Committee
The second stage of review involves the assessment of a large group of proposals by one of several Multidisciplinary Assessment Committees (MACs). The specific number of MACs will be determined by the number of submissions. Each MAC receives the input from the expert review process and is responsible for assessing the outputs and outcomes from previous CFI awards in the area (LEF only), and for assessing each proposal against all evaluation factors and the overall competition objectives relative to other competing requests. They are tasked with identifying proposals that meet the standards of excellence for the competition and establishing the amount that should be awarded to each proposal.

Each MAC will review proposals in one of the following three categories:
- Category A: Proposals requesting less than $2 million
- Category B: Proposals requesting between $2 million and $7 million
- Category C: Proposals requesting more than $7 million

The boundaries between these categories are subject to change in order to equally distribute the workload between MACs.

The members of each MAC are chosen for their capacity to assess proposals based on the three CFI criteria, and for their breadth and understanding of the research environment, the niches of innovative excellence in eligible institutions and of the breadth of impacts and outcomes from research investments across the entire landscape of research activity.
MACs are asked to base their assessment on the established criteria and to be selective. For LEF proposals, satisfactory performance of the previous CFI awards is an essential criterion for recommending proposals for funding.

To assist in the next stage of review, the MACs are asked, in addition to identifying the proposals that meet standards of excellence, to identify a subset of those proposals that are of exceptional merit. Since the MACs are instructed to be extremely selective in the proposals they deem exceptional, each MAC is limited to choosing only a few proposals in this category.

**Special Multidisciplinary Assessment Committee**

The third stage of review involves a review and integration of the MAC assessments by a Special Multidisciplinary Assessment Committee, the S-MAC. The S-MAC is charged with ensuring consistency among the MACs and, in instances where MAC recommendations exceed the available resources, the S-MAC recommends to the CFI Board of directors the proposals that most effectively support the CFI’s mandate, the objectives of the competition and represent the most effective portfolio of investments for Canada.

The primary role of the S-MAC is to make final funding recommendations based on strategic considerations. In building the suite of proposals, the S-MAC will consider the degree to which each proposal meets the overall objectives of the competition and will give priority to proposals that maximize the use of research infrastructure; enable world-class, multidisciplinary, and multisectoral research and technology development; and that capitalize on areas of regional and national strengths.

In making its funding recommendations to the Board, the S-MAC will be required to ensure that at least two-thirds of the competition budget is awarded to meritorious LEF proposals.

**Collaboration with provinces**

To coordinate the review processes and avoid duplication of review efforts, the CFI will provide committee reports, along with the names and affiliations of committee members, to relevant provincial and territorial funding authorities. Disclosure of committee reports will be made only in accordance with agreements between the CFI and provincial or territorial authorities, as permissible pursuant to paragraph 8(2)(f) of the Privacy Act.

In addition, representatives from the relevant provincial or territorial authorities will be invited to participate as observers throughout the expert review process and will have the opportunity to submit their respective views on proposals for consideration by the S-MAC.

The CFI encourages institutions to work with provinces as a key partner at an early stage in the planning and development of proposals.
Funding decisions
All funding decisions will be made by the CFI Board of Directors at its November 2012 meeting. For each proposal, the review materials will be provided to the applicant institution.

How to apply
Separate application instructions will accompany the application form to assist institutions and project leaders in completing electronic applications to the 2012 LEF/NIF competition. Institutions must apply through web-based electronic forms available on the CFI website.

Administrative regulations and conditions of funding
For more information on administrative regulations and conditions of funding, please see the CFI policy and program guide.
Annex 1: Institutional envelopes

Given the limited resources available for this competition and the significant time and effort required by institutions to design major projects and prepare proposals, institutional envelopes will place an upper limit on the total value of the funding that an eligible institution may request from the CFI for LEF and NIF proposals combined. Although at least two-thirds of the available budget will be awarded to meritorious LEF proposals, there is no pre-set allocation for institutional envelopes between the two funds.

The envelopes are calculated in the following manner:

- The overall envelope allocation will be three times the available budget of $155 million (i.e., $465 million).
  - Each institution’s envelope is calculated based on its average share of research sponsored by the three federal funding agencies over the period 2007-08 through 2009-10.
- CFI eligible institutions will have a minimum envelope of $1 million.

Institutional envelopes include affiliated research hospitals.

Multi-institutional projects

Two or more institutions may enter into agreements to share project costs among institutional envelopes. By the notice of intent deadline, the lead institution must communicate to the CFI the dollar value of its share of a multi-institutional proposal as well as the names of the other participating institutions and the value of each institution’s share.

Deadline to adhere to institutional envelope limits

By the notice of intent deadline (January 20, 2012), institutions must ensure that the total value of the proposals being submitted does not exceed their total envelope. There will not be an online control or calculation of envelopes. At the time of notice of intent submission, and again at the submission of the full proposal (April 26, 2012), the CFI will ensure that the total value of the requested CFI funding at each institution is within its envelope.

Exceptions for adhering to the institutional envelope

Should an institution choose to submit a single proposal to the competition, it will not be required to respect its institutional envelope.
## Envelopes by institution

<table>
<thead>
<tr>
<th>Institution</th>
<th>Envelope</th>
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<tbody>
<tr>
<td>University of Toronto (and affiliated hospitals)</td>
<td>$67,600,000</td>
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<tr>
<td>University of British Columbia (and affiliated hospitals)</td>
<td>$46,825,000</td>
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<tr>
<td>McGill University (and affiliated hospitals)</td>
<td>$43,900,000</td>
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<td>Université de Montréal (and affiliated hospitals)</td>
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<td>University of Alberta (and affiliated hospitals)</td>
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<td>Université Laval (and affiliated hospitals)</td>
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<td>University of Calgary (and affiliated hospitals)</td>
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<td>University of Ottawa (and affiliated hospitals)</td>
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<td>Simon Fraser University</td>
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<td>Laurentian University</td>
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