



Canada Foundation for Innovation
Fondation canadienne pour l'innovation

The Canada Foundation for Innovation

Background Information and Guidelines for Expert Committees

2009 Competition: Leading Edge Fund (LEF) New Initiatives Fund (NIF)

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CFI's Mission and Mandate

The Canada Foundation for Innovation (CFI) is an independent corporation created by the Government of Canada to fund research infrastructure. The CFI's mandate is to strengthen the capacity of Canadian universities, colleges, research hospitals, and non-profit research institutions to carry out world-class research and technology development that benefits Canadians (see Annex A for common CFI definitions).

Since its creation in 1997, the CFI has committed more than \$3.8 billion in support of 5,746 projects at 128 research institutions across Canada.

Additional information on the CFI is available on our website at www.innovation.ca.

Context and Challenge

The CFI's 2009 Leading Edge and New Initiatives Funds (LEF/NIF) competition will invest in world-class infrastructure projects that both sustain and enhance areas of activity in which major investments have already been made, and explore new research directions. This competition will enable revolutionary research and technology development projects that are critically dependent on access to new and powerful research resources – breakthrough projects that open new field of investigation, overturn existing understanding, or create new technologies. Such revolutionary projects often involve researchers working across disciplines as they address most profound challenges and issues of our time. Awards under this competition will integrate complementary and radically different research perspectives.

Overview of LEF & NIF

The LEF and NIF have the common goal of enabling institutions, alone or in groups, to strengthen their research infrastructure in priority areas as identified in their strategic research plans. Both funds promote multidisciplinary and inter-institutional approaches where appropriate and enable Canadian researchers to tackle groundbreaking projects. However, each Fund has its own distinct intent and purpose.

Leading Edge Fund (LEF)

- The LEF seeks to support leading edge activities that **build on past investments** that the CFI has made at the applicant institution(s) and are **dependent upon the results and outcomes of these infrastructure projects**. LEF projects should strengthen particularly successful and productive activities in areas of institutional strategic priority. The institution should have a competitive advantage and a proven track record in research outputs and innovations that are linked with the prior CFI investments.

New Initiative Fund (NIF)

- The NIF seeks to support promising innovative directions in research and technology development that **do not build on past CFI investment** at the institution and are not dependent on the results and outcomes of past infrastructure projects. NIF projects will be in areas of institutional strategic priority that have not received previous support from the CFI and that are aligned with the institutions' strategic research plan.

The 2009 Competition

The CFI has allocated a budget of up to \$400 million for this competition, plus an associated \$120 million offered through the Infrastructure Operating Fund to cover the operations and maintenance costs of successful projects. There is no pre-determined allocation of the budget between the LEF and NIF funds, thus all applications are in competition with each other. The CFI normally funds up to 40 percent of a project's infrastructure costs which are invested in partnership with eligible institutions and their funding partners from the public, private, and voluntary sectors who provide the remainder.

The proposals your expert committee is tasked to review may include applications belonging to either one of these funds. Many expert committees will review both LEF and NIF applications concurrently.

The CFI is expecting to receive LEF and NIF proposals totaling approximately \$1.7 billion. Hence the competition will be very intense.

Merit Review Process

All applications submitted to the LEF and NIF will share a common three-stage merit review process. Each application is first reviewed by experts in the relevant research area(s). The purpose of this review is to identify the strengths and weaknesses of the proposals.

The second stage of the merit review process involves convening a set of Multidisciplinary Assessment Committees (MAC) which will meet in April 2009. Each MAC will review a group of applications spanning a variety of research disciplines. Based on its review of the proposals and on the advice received from the experts, the MAC considers the degree to which each request satisfies the assessment criteria, including the benefits to Canada (a criterion not evaluated by the experts), relative to other competing infrastructure projects. Projects recommended by the MACs are assessed by a special committee – the S-MAC, comprising the third stage of the review. The S-MAC selects those proposals that most effectively support CFI's mandate and represent the most effective portfolio of investments in infrastructure in Canada. The S-MAC's recommendations are submitted to the CFI Board of Directors. The Board will make the final decisions at its meeting in June 2009.

The CFI review process is guided by the following three criteria that reflect its mandate:

- Quality of research and need for infrastructure;
- Contribution to strengthening the capacity for innovation;
- The potential benefits of the research to Canada.

In order to be funded, a proposal must satisfy all three criteria to a degree appropriate to the size and complexity of the infrastructure project.

The Role of Expert Committees

The role of the expert committees is to conduct an in-depth review of one or more proposals in a related research or technology development area.

The committees are comprised of a chair who has a general background in the area of the proposals and 3 to 6 members, depending on the number and breadth of proposals within their purview, who have specific expertise in the various aspects of the proposals. In addition to providing advice on each proposal with respect to the evaluation criteria of the CFI, the committee is asked to provide comments when appropriate, on trends in fields, or issues we should consider in future competitions.

The expert committees review the projects in the context of two of the three CFI criteria: quality of research and need for infrastructure, and contributions to strengthening the capacity for innovation. The two assessment criteria are expressed by eight review factors in the application. Each review factor contains a number of points that the applicants are asked to address. Applicants are advised that failure to address all the points within each of the review factors will weaken the application.

For each review factor, a standard is provided. The committee is asked to review the information presented to determine the extent to which the requirements for each standard have been fulfilled. Specifically, the committee is asked to determine whether the standard is “not satisfied”, “partially satisfied”, “fully satisfied”, or “fully satisfied and significantly exceeded in one or more key aspects”. The committee is further expected to justify its choice by commenting on the strengths and weaknesses of the proposal with regards to each standard.

The majority of the review factors of the LEF and NIF are the same. The only difference is the requirement for a performance report for LEF projects as these build on previous CFI investments and the additional criterion serves to assess the research performance resulting from the earlier investment.

The Review Process

Proposals assigned to an expert committee will be reviewed using one or both of the following approaches:

(a) Closed door review of proposals

The expert committee reviews proposals requesting less than \$7 million during a closed door meeting.

(b) Face to face meetings with representatives of institutions

- Face to face meetings are normally held with representatives of the institution(s) involved in projects requesting over \$7 million from CFI. These private meetings offer committee members an opportunity to discuss the proposal with representatives of the institution(s) and to raise questions based on the information provided in the application.
- Prior to the face to face meeting with the applicants, the committee meets in private to discuss the proposal and identify questions to be raised with representatives of the institution(s) based on the information provided in the application.
- The meeting with representatives of the institution(s) usually lasts a maximum of one hour, beginning with a 10 minute presentation by the representatives to give an overview of the proposal. This is not an opportunity for the applicants to provide additional information not included in the application. The committee then asks questions about the project on points that need clarification
- Participants include at least one university administrator, the project leader and may include other users of the infrastructure and partners. For proposals involving only one institution, there are no more than 4 institutional representatives participating in the meeting. For proposals involving more than one institution, up to 6 individuals may participate. A list of participants will be made available in advance of the face to face meeting.
- In some cases, a representative of a provincial government that is considering contributing funds to the proposal attends the face to face meeting as an observer. Additionally, representatives from federal research funding agencies will be invited to attend as observers the review of projects requesting more than \$10 million from the CFI.

Committee Reports

A 3-5 page report is required for each proposal reviewed by the committee. Reports document the committee's selection for each standard (e.g. not satisfied, fully satisfied, etc.) and the strengths and weaknesses supporting its choice. Furthermore, reports should also contain the committee's assessment of the finance module, including identification of items that should be removed or that are not adequately justified in view of the research activities planned. Similarly, the adequacy of the budget cost estimates, and where applicable, the appropriateness of the plans for construction (see Appendix B), should be reviewed by the committee. **A recommendation on whether the project should be funded is NOT required in the report.** However, should the committee suggest not to fund part of the infrastructure, the committee is asked to establish the amount by which the project's budget should be reduced.

Committee reports are normally drafted at the meeting and finalized within a few days in consultation with the Chair. At the beginning of the meeting, the group may want to agree on who (CFI's Senior Programs Officer, committee members) will be responsible for drafting the report or sections thereof for each proposal. A final report for each proposal is distributed to all committee members. At a minimum, the expert committee must agree on the main points made in each proposal report. All reports are transmitted to Multidisciplinary Assessment Committees (MACs) to assist the members in their evaluation of the proposals. Following the announcement of the Board's decisions, the reports, along with a committee membership, are provided to the applicant institution(s).

Appendix A

Common CFI Definitions

For all CFI Funds, the following definitions apply:

Infrastructure

The CFI funds projects to develop or acquire research infrastructure. It **does not fund the conduct of research** or salaries of investigators.

Infrastructure is defined as equipment, scientific collections, computer software, information databases, and communication linkages, used or to be used primarily for carrying out research, including the housing and installations essential for the use and servicing of this infrastructure.

Innovation

Innovation is a process that begins with the creation of knowledge in research, and continues through its applications, for the benefit of Canadian society.

Research

Experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts or new knowledge directed primarily towards a specific practical aim or objective.

Technology Development

Systematic work, drawing on existing knowledge gained from research or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or substantially improving those already produced or installed.

Research Training

The training of highly qualified personnel (HQP) through research, including technicians, research associates, undergraduate students, graduate students, postdoctoral fellows and other trainees.

Applicant

For all CFI awards, institutions are the applicants, not individual researchers, thus only institutions may submit applications to the 2009 LEF and NIF competition.

Appendix B

Application Guidelines for Construction of New Buildings and Major Building Renovations

Eligibility of construction and renovation:

- Construction of a new building or development of new space (e.g. new floors) in an existing building is eligible only when the new space is essential to house and use equipment and other eligible infrastructure being acquired. Where there is an option to renovate rather than construct a new building, the most cost-effective option must be chosen.
- Eligible costs include the direct construction or renovation costs, soft costs, contingency costs (not to exceed 10% of construction costs) of:
 - Space to house infrastructure (e.g., laboratories, animal facilities)
 - Space to use the infrastructure or conduct research (e.g., workstations, storage areas)
 - Additional space to house eligible infrastructure that is not part of the current proposal, that is essential to the use of the requested infrastructure (as part of the current proposal)
- Non-eligible costs include the construction and renovation costs, soft costs, and contingency plans of:
 - Space for non-research use (e.g., administration, teaching, clinical services)
 - Space to house non-eligible equipment
 - Office space for faculty, administrative staff, and students
 - Space for meeting or conference rooms
- Construction or renovation are expected to commence within **18 months** following the award announcement. This means that contracts for construction or renovation must have been finalized, and the work begun.

What information is required in the application?

For all projects involving construction or major renovation, the institutions must provide the following information:

- The main sections of the proposal must describe and justify, in terms of the innovative research it will enable, the research infrastructure to be located in the new space, whether or not funding is being requested to acquire the infrastructure in the proposal.
- Construction or renovation plans must be developed well beyond the conceptual stage at the time of submission of a proposal.
- Institutions must be careful to submit realistic and reliable cost estimates in their applications. The transfer of funds from other budget items into construction costs will not be allowed after award finalization.
- Complete description of the entire new space, inclusive of common elements (e.g., corridors, washrooms), including location(s), size, and nature (e.g., wet lab, greenhouse).
- Timeline identifying key dates for the various stages of the proposed construction.

- Detailed breakdown of the overall cost of the construction or renovation project categorized by cost component (e.g., direct or soft costs)
- Rationale for special circumstance which may affect the cost
- Overall cost per square foot or meter
- When construction or renovation involves multiple rooms, floor plans of the proposed news area(s), showing where the infrastructure will be located and the scale of the plans. Floor drawings are considered to be additional to the application page limitations and can be appended to the paper copy of the proposal