Guidelines for Expert Committees

College-Industry Innovation Fund (CIIF) – Stream 1

June 2017



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CFI'S MISSION AND MANDATE

Created by the Government of Canada in 1997, the Canada Foundation for Innovation (CFI) strives to build our nation's capacity to undertake world-class research and technology development to benefit Canadians. Thanks to CFI investment in state-of-the-art facilities and equipment, universities, colleges, research hospitals and non-profit research institutions are attracting and retaining the world's top talent, training the next generation of researchers, supporting private-sector innovation and creating high-quality jobs that strengthen Canada's position in today's knowledge economy. Visit Innovation.ca for more.

COLLEGE-INDUSTRY INNOVATION FUND

Canadian colleges, polytechnics and cégeps have taken advantage of their strong linkages with the private sector, mostly with small- and medium-sized enterprises at the local, regional and national level, to play an increasingly important role in supporting Canadian business innovation¹. Because colleges develop and test new products, help businesses adopt innovative processes and adapt technologies to gain new competitive advantages, they are well positioned to deliver business innovation solutions to address their private-sector partners' needs and challenges.

The College-Industry Innovation Fund (CIIF) seeks to enhance the capacity of colleges to support business innovation in Canada by providing them with state-of-the-art, industry-relevant research infrastructure to foster partnerships with the private sector in a specific area of strategic priority to the institution. These investments are to help colleges: strengthen their applied research and technology development capacity across all domains (from natural and health sciences, to engineering, to social sciences and humanities); expand partnerships — new and old — with private-sector partners as well as ultimate beneficiaries or end users from other sectors (if applicable); and, reinforce their participation in college-industry clusters in which they already play a pivotal role. Ultimately, business innovation generated through applied research partnerships between colleges and the private-sector is expected to improve the productivity and competitiveness of a company or an industry and lead to socioeconomic benefits locally, regionally and nationally.

This fund is intended to support substantial research infrastructure — made up of a single item or a collection of items — and should add to the existing applied research capacity of the college. It should also provide tools and capabilities to a group of college researchers to expand its network of partners and increase the number of collaborative projects with the private sector. However, while responding to industry needs, the proposed activities and requested infrastructure should not duplicate existing services or facilities in the region.

An eligible infrastructure project involves the acquisition, development or major upgrade of applied research or technology development infrastructure. Eligible infrastructure items include equipment, scientific collections, computer software, information databases and communication linkages used primarily for carrying out research. Construction or renovations essential for housing the CFI infrastructure are also deemed eligible.

The CFI offers two competition streams under the College-Industry Innovation Fund. Through Stream 1, CFI accepts infrastructure requests for enhancing existing applied research and technology development capacity in colleges. Through Stream 2, the CFI accepts research infrastructure requests associated with an application submitted to the Natural Sciences and Engineering Research Council of Canada (NSERC) for a College and Community Innovation Program – Build Innovation Enhancement Grant. This joint

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¹ Business innovation is broadly defined as the creation or adaptation of knowledge and technology to develop or improve a product, process or service, with the goal of improving the productivity and competitiveness of a company or a sector.

initiative allows colleges to apply for a comprehensive funding package supporting both research costs (through NSERC) and research infrastructure (through CFI's CIIF – Stream 2).

Available funding

Over the period of 2016–19, the CFI has allocated up to \$40 million to support proposals submitted to the College-Industry Innovation Fund – Streams 1 and 2. This amount includes the capital costs of successful proposals and a CFI Infrastructure Operating Fund allocation. This additional contribution, which is equivalent to 30 percent of the CIIF award, is automatically provided to successful applicants to help cover a portion of the operating and maintenance costs of their new infrastructure.

The CFI funds up to 40 percent of a project's infrastructure (or capital) costs. The balance of the costs, up to 60 percent of the total project costs, may be provided by eligible institutions and their funding partners from the public, private and non-profit sectors.

Colleges may submit two proposals per competition, requesting up to \$1 million from the CFI. In the event that a college decides to submit more than one proposal per competition, the two must not fall within the same strategic applied research area. In all instances, the CFI considers the institution, and not the individual researcher, as the applicant.

Proposal characteristics

Proposals consist of two sections: the project section and the financial section. The project section provides information about the proposed project, including key participants, how the project meets the objectives and criteria of the competition, financial resources for operating and maintenance, as well as a budget justification for the infrastructure items being requested. The financial section provides information pertaining to the budgetary details of the proposal (e.g. cost of items being requested, floor plans for proposals that include construction or renovation involving multiple rooms), and contributions from partners.

Proposals should clearly present the merits of the proposed CIIF project and demonstrate how the requested infrastructure will achieve the three competition objectives:

- Create and enhance college-industry partnerships leading to business innovation using industryrelevant, state-of-the-art research infrastructure;
- Build upon proven applied research capacity and track record of partnerships with the private sector in an area of strategic priority to the institution; and,
- Generate socioeconomic benefits in the region and nationally including the development of highly skilled personnel.

The CFI only funds research infrastructure and not the direct costs of research. The information provided should be sufficient to assess the need for the infrastructure requested in light of the applied research and technology development activities envisioned. The CFI expects proposals to clearly demonstrate the commitment from private-sector partners through active participation and contribution to the applied research projects and anticipated benefits. The level of involvement of industrial partners is a key consideration when making funding decisions. Close collaboration between the college and private-sector partners is considered indispensable to enabling business innovation

As set forth in the above-mentioned objectives, institutions are encouraged to build on their strengths and competitive advantages in research. Accordingly, the CFI requires each eligible institution to submit a summary of its strategic research plan. This plan which sets priorities based on the institution's vision for the future is provided to the Expert and Multidisciplinary Assessment Committees.

STRUCTURED MERIT-REVIEW PROCESS

The CFI structured merit-review process has two stages:

1. Review by Expert Committees; and,

2. Review by a Multidisciplinary Assessment Committee (MAC).

Stage 1: Expert Committees

In this first stage of the structured merit-review process, the CFI will seek advice from experts with specific knowledge and experience in the various aspects of the proposal, as well as those with a thorough understanding of the business innovation process and the Canadian college environment.

Expert Committees typically include three to eight members (depending on the number and breadth of proposals for review). For Expert Committees evaluating up to three proposals, the committee will convene by teleconference. Committees evaluating more than three proposals will convene in person for one to two days, depending on the number of proposals. In-person committees comprise a Chair who ensures that the Expert Committee functions effectively and objectively in accordance with CFI policies.

The Expert Committees will assess the strengths and weaknesses of the proposals in relation to five assessment criteria which reflect the CIIF's competition objectives (see Assessment criteria section below).

Assessment criteria

The CIIF structured merit-review process is guided by the three overarching competition objectives that are reflected in five assessment criteria. Each assessment criterion is evaluated against a standard and contains a number of aspects that the applicants must address in the proposal (see Appendix A: Assessment criteria — quick reference guide). The CFI advises applicants that failure to address all the points within each of the assessment criteria will weaken the proposal. The extent to which each standard has been fulfilled should be based on the information provided in the proposal. In order to be funded, a proposal must satisfy all assessment criteria.

Expert Committee members are asked to assess the degree to which the proposal meets each criterion standard and to substantiate their assessment by commenting on the strengths and weaknesses of the proposal in the context of each criterion. The assessment criteria and respective standards are:

Contributions to business innovation

The proposed applied research activities respond to well-identified needs of the private sector and have been developed in collaboration with key industrial partners to ensure they achieve the intended business innovation outcomes.

Infrastructure (including the budget justification)

The requested infrastructure plays an essential role in creating and enhancing collaborations with industrial partners. The infrastructure will be optimally used and maintained to ensure continued collaborations with, and relevance to, the partners.

Enhancing applied research capacity

The proposal builds on the institution's proven applied research capacity and key investments in people and infrastructure in the area of strategic priority. Existing applied research capacity will be further enhanced by the requested infrastructure and associated institutional commitments.

Partnerships with the private sector

The college has demonstrated its ability to build and maintain productive partnerships with the private sector in the area of strategic priority.

Benefits to Canadians

The proposed activities have the potential to lead to business innovation and socioeconomic benefits for the region and for Canada. The proposed activities will enable the development of highly skilled, qualified personnel.

Rating scale

Expert Committee members are asked to assess the degree to which a proposal meets each standard using the scale below.



Expert Committees do not make funding recommendations for the proposals under their review. However, if the committee finds that any items of the requested infrastructure are not adequately justified, it may suggest not funding part of the infrastructure and recommend the amount by which the project's budget should be reduced.

Expert Committee members are asked to review each proposal assigned to their committee and to submit their preliminary assessment, including ratings and comments, to the CFI a week in advance of the meeting. Preliminary assessments help focus the discussion at the meeting and inform the writing of the Expert Committee report. Individual (preliminary) assessments will only be used as reference in writing the Expert Committee report and are not part of the material sent to applicants once funding decisions are made.

During the meeting, Expert Committee members will discuss their assessments and reach consensus on criterion ratings and the major strengths and weaknesses for each criterion. For each proposal, CFI staff will draft a two- to three-page Expert Committee report that reflects the members' consensus opinion. Draft Expert Committee reports will be sent to the committee members for review and approval approximately a week following the teleconference.

Expert Committee reports are provided to the Multidisciplinary Assessment Committee (MAC; see stage 2: Multidisciplinary Assessment Committee) along with the committee membership, to assist the MAC members in their evaluation of the proposals.

Dates	Activities	
May 15, 2017	Deadline for submission of CIIF – Stream 1 proposals	
Late May 2017	Access CAMS and start reviewing proposals	 Activate access to the CFI Awards Management System (CAMS) Accept to adhere to the conflict of interest and confidentiality agreement in CAMS and inform the CFI of any conflict of interest Read the <i>Guidelines for CIIF Expert</i> <i>Committees</i> Evaluate the proposal(s) against the assessment criteria Prepare a preliminary assessment using the CFI Expert Committee report template and email to the CFI a week prior to the meeting
June – July 2017	Attend meeting and finalize report(s)	 Expert Committee meets to discuss and evaluate proposals. By consensus, the committee assesses each criterion and identifies strengths and weaknesses for each Review the draft Expert Committee report, to be sent within a week of the meeting

Timeline and key Expert Committee member activities

Documentation provided before the meeting

Once participation has been accepted, Expert Committee members will receive an email with instructions for the activation of their access to the reviewer dashboard in the CFI Awards Management System (CAMS). The reviewer dashboard is where members will find all the information to conduct their review. To access the review materials, members will simply need to click on the committee name to bring them to the review and documentation page. On this page they will find:

- Relevant reference materials (e.g. meeting agenda, CFI Expert Committee report template, Assessment criteria quick reference guide, etc.); and,
- Project material, including proposal and associated institutional strategic research plan summary.

For more information on how to use the CFI reviewer portal, please consult <u>Getting started with the CFI</u> Awards Management System (CAMS): An overview document for reviewers.

Stage 2: Multidisciplinary Assessment Committee

The second stage of the merit review process involves convening a Multidisciplinary Assessment Committee (MAC) to review all the proposals submitted to the current cycle of the CIIF – Stream 1 competition. The MAC usually meets in late September.

Based on its assessment of the proposals and guided by the Expert Committees' reports, the MAC considers the degree to which each proposal satisfies the three competition objectives:

- Create and enhance college-industry partnerships leading to business innovation using industryrelevant, state-of-the-art research infrastructure;
- Build upon proven applied research capacity and track record of partnerships with the private sector in an area of strategic priority to the institution; and,
- Generate socioeconomic benefits in the region and nationally including the development of highly skilled personnel.

Given the limited funding envelope, the MAC is charged with assessing the excellence of proposals against competing requests, determining which proposals most effectively support CFI's mandate and the objectives of the CIIF, and recommending for funding only those that best meet the standards of excellence.

Typically, the CFI Board will make the final funding decisions at its November meeting. Following the announcement of the Board's decisions, the Expert Committee and MAC reports, along with the the list of members of both committees, are provided to the applicant institutions, whether the project is funded or not.

COLLABORATION WITH PROVINCES AND TERRITORIES

To coordinate the review processes and avoid duplication of 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 the list and committee reports will be made only in accordance with agreements between the CFI and provincial or territorial authorities, as permissible pursuant to the Privacy Act.

GOVERNING PRINCIPLES FOR EXPERT REVIEWERS

Expert Committee members are expected to maintain the highest standards of ethics in fulfilling their role. They are appointed as individuals — not as advocates or representatives of their discipline or of any organization. They must also adhere to CFI's <u>conflict of interest and confidentiality agreement</u> from which some extracts are given in Appendix B.

The CFI expects the institutions and researchers not to contact reviewers for information on committee deliberations. Reviewers are instructed not to discuss any matters related to the review process or specific proposals with the applicants or outside the Expert Committee meeting. Please refer any questions from institutions or other parties to the CFI for response.

Equity in the Merit Review Process

Merit review by nature is a subjective process. Bias may manifest in several ways and could be based on a school of thought, fundamental versus applied or translational research, areas of research, subdisciplines or approaches (including emerging ones), size or reputation of a participating institution, age, language, personal factors or gender of the applicant. To sensitize reviewer to unconscious biases they may hold, CFI cautions members against any judgment of an application based on such factors, and asks them to constantly guard against the possibility of implicit bias influencing the decision-making process. This is essential in order to ensure that all participants in the merit review process have the same base knowledge of the processes and policies in order to conduct effective and fair merit review.

APPENDIX A

Assessment criteria – quick reference guide

Each assessment criterion is evaluated against a standard (highlighted text). Reviewers are asked to assess the degree to which the proposal meets each standard using the scale below. In addition, comments on the strengths and weaknesses to support the assessment of each criterion are required.

EX Satisfies and significantly exceeds the criterion standard in one or more aspects

Satisfies the
criterion
standard in all
aspects

- Satisfies the criterion standard with only a few minor weaknesses
- Partially satisfies the criterion standard with some significant weaknesses
- Does not satisfy the criterion standard due to major weaknesses

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Please note that each criterion contains a number of aspects (bulleted list) that the applicant must address in the proposal. Applicant institutions were advised that failure to address all aspects will be considered a weakness. They were also instructed to refer to the performance indicators within the context of the relevant assessment criteria.

The five assessment criteria, criteria standards and aspects are:

Contribution to business innovation

The proposed applied research activities respond to well-identified needs of the private sector and have been developed in collaboration with key industrial partners to ensure they achieve the intended business innovation outcomes.

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- Outline the approach (e.g. stakeholder consultations) the college took to establish the needs of the
 private sector for the proposed applied research activities and describe the business development
 and outreach plans.
- Identify key industrial partners as well as the process used to select them and detail their contributions (e.g. time, financial, role in joint projects) to these applied research activities.
- Describe the applied research activities to be undertaken in partnership with the private sector and the specific industry needs these activities will address. Include a brief description of research methodologies and the business innovation objectives of these projects.

Infrastructure (including the budget justification)

The requested infrastructure plays an essential role in creating and enhancing collaborations with industrial partners. The infrastructure will be optimally used and maintained to ensure continued collaborations with, and relevance to, the partners.

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- By referring to the individual items (including item number) listed in the finance module, demonstrate that the requested infrastructure is required for the applied research activities. Demonstrate how the infrastructure is industry-relevant and essential for creating and enhancing collaborations with industrial partners.
- Indicate how the infrastructure will be efficiently used and maintained in the short term and sustained over the long-term.
- Demonstrate the versatility of the requested infrastructure to respond to immediate and longer-term applied research needs of industrial partners.
- For proposals that include construction or renovation costs, the applicant must also include a

description of the entire space, a breakdown of the overall cost of the construction/renovation project, and a timeline identifying key dates for the various stages of the proposed renovation/construction.

Note: The Expert Committee report should contain an assessment of the budget, including identification of any items that should be removed or that are not adequately justified in view of the planned applied research activities. Similarly, the adequacy of the cost estimates for items requested should be reviewed by the committee.

Enhancing applied research capacity

The proposal builds on the institution's proven applied research capacity and key investments in people and infrastructure in the area of strategic priority. Existing applied research capacity will be further enhanced by the requested infrastructure and associated institutional commitments.

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- Describe the college's current applied research capacity, including the experience and expertise of key participants (from the college and private sector), administrative and business development personnel, available equipment and research space, and sources of financial support in this area of strategic priority.
- Describe how the institution's existing applied research capacity will be enhanced by the requested infrastructure.
- Specify the institutional commitments in support of this proposal.

Partnerships with the private sector

The college has demonstrated its ability to build and maintain productive partnerships with the private sector in the area of strategic priority.

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- Demonstrate the college's and research team's track record of establishing and maintaining
 partnerships with the private sector.
- Provide evidence of the business innovation outcomes enabled by these partnerships.

Benefits to Canada

The proposed activities have the potential to lead to business innovation and socioeconomic benefits for the region and for Canada. The proposed activities will enable the development of highly skilled, qualified personnel.

 Outline the expected business innovation outcomes of the applied research activities for the private sector and other sectors as applicable. Specify the timeframe over which these outcomes are expected to occur and their anticipated benefits for the region and for Canada.

 Describe the skills highly qualified personnel (HQP) will acquire through engagement with private sector partners in the applied research activities using the requested infrastructure. Include the anticipated number of HQP and describe the plans to involve them in applied research activities (e.g. co-op projects, summer students).

APPENDIX B

Conflict of interest policy

The Canada Foundation for Innovation (CFI) must meet the highest ethical and integrity standards in all that it does in order to continue to merit the trust and confidence of the research community, the government and the public. CFI review committee members, external reviewers, and observers must meet the highest standards of ethical behaviour to maintain and enhance public confidence in CFI's ability to act in the public's best interest and for the long-term public good. Where a conflict arises between private and public interests, review committee members, external reviewers and observers will be expected to take the necessary measures to ensure that the public interest is protected.

Definition

A conflict of interest is a conflict between a person's duties and responsibilities with regard to the review process, and that person's private, professional, business or public interests. There may be a real, perceived or potential conflict of interest when the review committee member, external reviewer or observer:

- would receive professional or personal benefit resulting from the funding opportunity or proposal being reviewed;
- has a professional or personal relationship with a candidate or the applicant institution;
- has a direct or indirect financial interest in a funding opportunity or proposal being reviewed.

A conflict of interest may be deemed to exist or perceived as such when review committee members, external reviewers or observers:

- are a relative or close friend, or have a personal relationship with the candidates;
- are in a position to gain or lose financially/materially from the funding of the proposal;
- have had long-standing scientific or personal differences with the candidates;
- are currently affiliated with the candidates' institutions, organizations or companies including research hospitals and research institutes;
- are closely professionally affiliated with the candidates, as a result of having in the last six years:
 - frequent and regular interactions with the candidates in the course of their duties at their department, institution, organization or company;
 - o been a supervisor or a trainee of the candidates;
 - collaborated, published or shared funding with the candidates, or have plans to do so in the immediate future;
 - o been employed by the applicant institution;
- feel for any reason unable to provide an impartial review of the proposal.

Note: The CFI reserves the right to resolve areas of uncertainty and to determine if a conflict exists.



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