Tips for applicants

2019 Stream 1
College-Industry Innovation Fund
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About the CIIF

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CFI Infrastructure

Stream 2
NSERC CCI-IE + CFI

So far…$83.8M for 93 projects
CIIF by the numbers
Submissions & success rates
Stream 1

Success & Funding rates

 #: 55.6% $: 58.6%
 #: 75.0% $: 74.3%
 #: 50.0% $: 47.6%
 #: 31.6% $: 34.0%
 #: 42.3% $: 38.5%
 #: 52.0% $: 52.0%

Proposals submitted & funded

<table>
<thead>
<tr>
<th>Competition Year</th>
<th>Submitted</th>
<th>Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>2013</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>2015</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>2016</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>2017</td>
<td>26</td>
<td>11</td>
</tr>
<tr>
<td>2018</td>
<td>25</td>
<td>13</td>
</tr>
</tbody>
</table>

Total awarded:
- Competition 1 (2012): $13.3M
- Competition 2 (2013): $11.3M
- Competition 2016: $7M
- Competition 2017: $10.7M
- Competition 2018: $13.1M

Average award:
- Competition 1 (2012): $680k
- Competition 2 (2013): $578k
- Competition 4 (2015): $613k
- Competition 2016: $903k
- Competition 2017: $750k
- Competition 2018: $780k
Stream 1 & 2

Many Colleges have 1 funded project

Number of funded projects

<table>
<thead>
<tr>
<th>Number of colleges</th>
<th>Number of funded projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

Success rate for resubmissions

<table>
<thead>
<tr>
<th></th>
<th>New proposal</th>
<th>Resubmitted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46%</td>
<td>63%</td>
</tr>
</tbody>
</table>
Review Process
Review process

CFI administrative review

June-July: Expert committee – detailed review of 1-7 proposals by experts in the field, evaluate assessment criteria, 1h per proposal committee discussion, EC report written by CFI and approved by chair summarizes committee consensus

Sept/Oct: Multidisciplinary review – review of all proposals and EC reports, 15 min per proposal committee discussion, focus on competition objectives, funding recommendation, MAC report written by CFI and approved by chair

Nov: After Final decision by CFI Board – results communicated to colleges
Objectives vs. review criteria

**Objective 1**
Create and enhance college-industry partnerships leading to business innovation using industry-relevant, state-of-the-art research infrastructure.

**Contribution to business innovation**

**Infrastructure**

**Objective 2**
Build upon proven applied research capacity and a track record of partnerships with the private sector in an area of strategic priority to the institution.

**Enhancing applied research capacity**

**Partnerships with the private sector**

**Objective 3**
Generate socioeconomic benefits in the region and nationally including the development of highly skilled personnel.

**Benefits to Canada**
Observations from CFI’s administrative review
One page summary

How does the proposal meet the competition objectives?

Proposal: mostly written for experts in field
Summary: use language for non-experts intended for MAC
Consult with Compute Canada as outlined on its website: computecanada.ca
Infrastructure utilization

100% if

- primarily used for applied research & tech dev with private-sector partners
- used for training purposes

if training is articulated around applied research or technology development project aimed at business innovation
We encourage you to bundle all expected in-kind contributions from vendors into a single line.

Total in-kind Contributions from partners = Total in-kind portion of the Costs of individual items
Financial resources for O&M

- You must explain estimated costs and sources of support provided in these tables. Do so in the “Infrastructure and budget justification” section of the “Assessment Criteria” attachment.
Floor plans *(pdf attachment)*

- Use for floor plans only.
- Other information will be removed from the proposal.
Each criterion contains a number of aspects that must be addressed in the proposal. Proposal will be weakened if you don’t address all the aspects.
Observations from Reviewers: A Qualitative Analysis
Top 6

- **65%**: Lack of detail for applied research
- **52%**: Partner contribution to research not detailed
- **47%**: Past business outcomes not detailed
- **43%**: Stakeholder consultation insufficient
- **43%**: Weak potential for innovation
- **83%**: Infrastructure not well justified

% of not funded proposals
Contribution to business innovation

- Focus on your future plans and how they were determined.
- Make sure your descriptions provide a sufficient level of detail for experts in the field who will judge of the feasibility of the activities.
Weaknesses identified by EC

Contribution to business innovation

- 65%: Lack of detail for applied research activities
- 52%: Partner contribution to research activities not detailed
- 43%: Stakeholder consultation not extensive/poorly described
- 43%: Weak potential for innovation
- 26%: Lack of focus/too broad
- 22%: No example of business innovation
- 17%: Uniqueness of research program not addressed (other institutions doing similar research)
- 17%: Lack of business plan
- 17%: Safety/regulatory concerns not explained
- 13%: Missing details on location of infrastructure
- 13%: Engagement of partners questioned
- 13%: Weak outreach strategy

% of not funded proposals

identified by EC

identified by EC & MAC
Budget justification:

- Describe each item.
- Be sure to specify the item’s main features.
- Reviewers evaluate the item’s suitability for conducting the proposed activities using the methodology described.
<table>
<thead>
<tr>
<th>Weakness</th>
<th>EC</th>
<th>EC &amp; MAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure not well justified / not connected to applied research</td>
<td>83%</td>
<td></td>
</tr>
<tr>
<td>/ wrong equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance/management structure lacking</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Infrastructure or data management/access plan</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Infrastructure specifications not included</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Limited user base</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Not enough equipment/budget too low/missing key equipment</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Not enough personnel for O&amp;M</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Availability of similar infrastructure</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Budget imbalance relative to themes/projects</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>No expertise to use infrastructure</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>O&amp;M needs/costs/revenues not detailed</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Equipment not versatile to meet needs of industry</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>% of not funded proposals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Enhancing applied research capacity

- # of key participants limited to eight, but other people can participate in project.

- Reviewers expect the roles and contributions of each participant to be clearly explained in the “Assessment Criteria” attachment of the proposal.
## Weaknesses identified by EC

### Enhancing applied research capacity

<table>
<thead>
<tr>
<th>Weakness</th>
<th>Percentage</th>
<th>Identified by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing expertise / no critical mass of researchers</td>
<td>35%</td>
<td>EC</td>
</tr>
<tr>
<td>Missing collaboration outreach</td>
<td>17%</td>
<td>EC</td>
</tr>
<tr>
<td>Missing details on roles and responsibilities of team members</td>
<td>17%</td>
<td>EC</td>
</tr>
<tr>
<td>Unclear how requested infra will integrate with existing capacity</td>
<td>17%</td>
<td>EC &amp; MAC</td>
</tr>
<tr>
<td>Insufficient applied research capacity in area of proposed research</td>
<td>13%</td>
<td>EC</td>
</tr>
<tr>
<td>Missing details on collaboration</td>
<td>13%</td>
<td>EC &amp; MAC</td>
</tr>
<tr>
<td>Lack of detail on track record</td>
<td>13%</td>
<td>EC</td>
</tr>
</tbody>
</table>

% of not funded proposals
Partnerships with the private sector

- Focus on your past and current track record of partnerships in the area of the proposal.

- Future plans (enabled by the infrastructure you’re requesting) should be described in the “Contribution to business innovation” section instead.
Weaknesses identified by EC

Partnerships with private sector

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>48%</td>
<td>Past business outcomes insufficiently described</td>
</tr>
<tr>
<td>30%</td>
<td>Past partnerships not sufficiently described or related to projects</td>
</tr>
<tr>
<td>17%</td>
<td>Not enough partners identified</td>
</tr>
<tr>
<td>13%</td>
<td>Only new partnerships, no previous existing partners</td>
</tr>
<tr>
<td>13%</td>
<td>No plan to engage new/diverse partners</td>
</tr>
<tr>
<td>13%</td>
<td>Longevity of partnerships not described</td>
</tr>
</tbody>
</table>

% of not funded proposals identified by EC & MAC
Benefits to Canada

➢ Focus on medium and longer-term impacts of the proposed activities beyond the business innovation outcomes described in the “Contribution to business innovation” section.
Weaknesses identified by EC

Benefits

- **43%** • HQP plan not described or not appropriate
- **39%** • Benefits not detailed
- **26%** • Pathways not detailed
- **22%** • Weak proposal so unlikely/weak benefits
- **17%** • Timeline for outcomes absent or not well estimated
- **13%** • Missing examples of anticipated outcomes
- **13%** • Benefits to other industries unclear

% of not funded proposals

defined by EC & MAC

identified by EC
MAC
Weaknesses identified by MAC

**Objective 1**
- **61%** Infrastructure not well justified
- **57%** Low Partnership / missing strategic partner engagement plan
- **48%** Lack of detail for applied research activities
- **39%** Weak potential for innovation
- **39%** Too broad, lacking focus
- **22%** Partner contribution/relation to research activities not detailed

**Objective 2**
- **17%** Infrastructure sustainability / O+M planning missing
- **17%** Safety/regulatory/ethics concerns
- **17%** Unclear how new infrastructure will complement existing infrastructure
- **13%** Industry need not demonstrated
- **13%** Insufficient applied research projects planned

**Objective 3**
- **39%** Missing expertise on team
- **26%** Existing capacity unclear
- **22%** Weak track record of applied research in this domain
- **17%** Lack of detail for past outcomes
- **17%** Lack of detail for past partnerships

% of not funded proposals
- **43%** Outcomes for industry not detailed
- **26%** Missing details of benefits
- **26%** Unclear pathway to benefits
- **13%** HQP details missing
- **13%** Insufficient applied research projects planned
Keep in touch

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CIIF@innovation.ca
1. Outline the approach (e.g. stakeholder consultations) your college took to establish the needs of the private sector for the proposed applied research activities.
2. Identify key private-sector partners as well as the process used to select them.
3. Describe the applied research activities or projects that will be undertaken in partnership with the private sector. For each, include the following:
   a. Specify the business needs the project addresses, its objectives and intended outcomes.
   b. Describe the methodology that is considered to conduct the applied research activities.
   c. Detail the contributions (e.g. time, financial, role) of the private-sector partners to the project.
4. Describe your business development and outreach plans to stimulate new partnerships.

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.
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.

1. Describe each item and justify why it is needed to conduct the proposed applied research activities. Use the item number, quantity, cost and location found in the “Cost of individual items” table. Provide a cost breakdown for any grouping of items. For construction or renovation, provide a description of the space including its location, size and nature.

2. Demonstrate how the infrastructure is industry-relevant and essential for creating and enhancing collaborations with private-sector partners.

3. Demonstrate the versatility of the requested infrastructure to respond to immediate and longer-term applied research needs of private-sector partners.

4. Indicate how the infrastructure will be efficiently used and maintained in the short term and sustained over the long term. Refer to the “financial resources for operation and maintenance” section.
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.

1. Describe your college's current applied research capacity in this area of strategic priority, including:
   a. the experience and expertise of key participants (from your college and from the private sector), administrative and business development personnel;
   b. currently available equipment and research space; and
   c. sources of financial support.

2. Describe how your college's existing applied research capacity will be enhanced by the requested infrastructure.

3. Specify your college's 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.

1. Demonstrate your college’s and research team’s track record of establishing and maintaining partnerships with the private sector in the area.
2. Provide evidence of the business innovation outcomes enabled by these partnerships.
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.

1. Outline the anticipated benefits of the applied research activities and the potential impacts on the private sector (and other sectors as applicable).
2. Specify the timeframe over which these are expected to occur.
3. Specify the anticipated number of highly qualified personnel (HQP) and describe the plans to involve them in applied research activities (e.g. co-op projects, summer students).
4. Describe the skills HQP will acquire through engagement with private-sector partners in the applied research activities using the requested infrastructure.