CFI’s role in national research infrastructures

2019-11-29
A few words about us
22 years ago... the Canada Foundation for Innovation was created to solve the brain drain by investing in infrastructure for research.
Relationship between the CFI and the Government of Canada

CFI Members → CFI Board → CFI → Minister of Innovation, Science and Industry → Parliament
Mandate

TO BUILD OUR NATION’S CAPACITY TO UNDERTAKE WORLD-CLASS RESEARCH AND TECHNOLOGY DEVELOPMENT THAT BENEFITS CANADIANS
How

CFI fulfills this mandate by investing in the research infrastructure necessary for Canada’s leading researchers to discover, develop, and apply new knowledge in all areas of science, the humanities, social sciences, health, engineering and the environment.
Benefits to Canada

Social, health and environmental through scientific advances and collaboration

Economic through innovation and commercialization

Scientific by creating facilities that become powerful magnets for talented researchers

People by supporting the training of the new generation
A unique funding model

CFI provides 40% of infrastructure costs (remaining 60% provided by provinces, institutions and private sector)

Over 22 years, CFI has invested $8 billion in research infrastructure, generating nearly $20 billion in overall investment

Highly competitive funding requiring excellence and institutional commitment to maintaining the infrastructure for its useful life
Strategic Research Plans required for eligibility

Developed by institutions, in conjunction with their faculty and local communities and focused on matters of importance to their communities.
Major research facilities

University owned

Government of Canada facilities

Government of Canada contributions to international facilities
Major Science Initiatives Fund

- Launched in 2010
- Secure the operations of large-scale facilities which the CFI has created or supported through its capital investments in its other programs
- 2014+ expanded again to cover facilities regardless of CFI infrastructure investment
- CFI oversight guides these facilities in becoming better governed and managed
- 17 facilities are currently supported.
A DIVERSE COHORT
“With the development and delivery of the MSI Fund, the CFI has created a model of successful support and oversight for national research facilities.”
Guiding model
For RI portfolio management

- Roadmap of RI needs
  - Consultation to align programs with community needs
- Funding process
  - Capital and O&M separate
- International engagement
  - National and international considered together
- New or existing?
  - Moving towards a lifecycle approach that would allow for portfolio considerations
- Compete or complement
  - National scope so far has ensured "unique" facilities (i.e. complementary
- Community input
  - Oversight framework defines monitoring approach
- Monitoring
  - Annual workshops gather MSI-funded facilities on a yearly basis to identify needs and share good practices
- Closure
  - No political considerations
  - Open and transparent merit review
- Transparency
  - Based on merit-review and funding availability (both CFI and partners)
Thank you / Merci
Strategy for research infrastructure investments

Need for an improved approach

Some community driven efforts

Government currently exploring options
Core funds

- John R. Evans Leaders Fund: $1.5B
- Innovation Fund: $3.7B
- College-Industry Innovation Fund: $17M
- Exceptional Opportunities Fund: $65M
- Others e.g., Research hospital: $530M
- Infrastructure Operating Fund: $1.4B
- Major Science Initiatives Fund: $771M
- Others: $17M
THE EVOLVING RESEARCH ENVIRONMENT
A QUESTION OF BALANCE
## Awards by area of research

**CFI investments (as of Aug. 2018)**

<table>
<thead>
<tr>
<th>Area of application - sector</th>
<th># Awards</th>
<th>%Awards</th>
<th>CFI amount</th>
<th>% CFI amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>2,137</td>
<td>21%</td>
<td>$1,240,530,851</td>
<td>19%</td>
</tr>
<tr>
<td>Environment</td>
<td>977</td>
<td>9%</td>
<td>$353,205,961</td>
<td>6%</td>
</tr>
<tr>
<td>Health</td>
<td>4,464</td>
<td>43%</td>
<td>$2,913,511,294</td>
<td>45%</td>
</tr>
<tr>
<td>Science</td>
<td>2,124</td>
<td>20%</td>
<td>$1,760,831,949</td>
<td>28%</td>
</tr>
<tr>
<td>Social Sciences and Humanities</td>
<td>686</td>
<td>7%</td>
<td>$148,692,518</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10,388</strong></td>
<td><strong>100%</strong></td>
<td><strong>$6,416,772,573</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

* Does not include $1.4B awarded under Infrastructure Operating Fund (IOF)
## Awards by range of funding

**CFI investments (as of Aug. 2018)**

<table>
<thead>
<tr>
<th>Size of request</th>
<th># Awards</th>
<th>% Awards</th>
<th>CFI amount</th>
<th>% CFI amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 200K</td>
<td>6,790</td>
<td>65%</td>
<td>$766,533,221</td>
<td>12%</td>
</tr>
<tr>
<td>200K – 1M</td>
<td>2,697</td>
<td>26%</td>
<td>$940,282,900</td>
<td>15%</td>
</tr>
<tr>
<td>1M – 4M</td>
<td>541</td>
<td>5%</td>
<td>$1,126,483,933</td>
<td>17%</td>
</tr>
<tr>
<td>4M – 10M</td>
<td>265</td>
<td>3%</td>
<td>$1,471,020,371</td>
<td>23%</td>
</tr>
<tr>
<td>10M – 20M</td>
<td>64</td>
<td>1%</td>
<td>$831,223,225</td>
<td>13%</td>
</tr>
<tr>
<td>&gt; 20M</td>
<td>31</td>
<td>0%</td>
<td>$1,281,228,923</td>
<td>20%</td>
</tr>
</tbody>
</table>

| Total           | 10,388   | 100%     | $6,416,772,573 | 100%         |

* Does not include $1.4B awarded under the Infrastructure Operating Fund (IOF)
Strategic roadmap

Focus on

Mission, core values, building on base of excellence in evaluation, service and support

Convening, communicating, sharing

Ensuring access and participation

The future, moving from interdisciplinary to convergence

Global issues and collaborations
The landscape we share
Our Roadmap

**Our vision**
Canada's researchers lead the world in contributing to competitiveness, prosperity and quality of life

**Our mandate**
- World-class research
- World-class talent
- World-class innovation

**Our strategic directions**
- Invest in excellence
- Sustain and enhance Canada's research capacity
- Forge productive partnerships
- Build global influence
- Be a trusted voice
- Track impacts

**Our valued assets**
- Modern governance and organizational excellence
- Rigorous decision-making and accountability
- Highly skilled human resources