

INNOVATION FUND: INTERNAL SELECTION PROCESS



INNOVATION

INTRODUCTION

The Canada Foundation for Innovation's (CFI) 2015 pan-Canadian consultation revealed that a number of institutions wanted the CFI to continue to enhance the dissemination and sharing of good practices in all areas of institutional activity. Of particular interest was the internal decision-making processes developed by institutions for their Innovation Fund proposals. This information could provide invaluable insights not just to institutions, but also to the CFI. For example, a realistic estimate of the total number and quality of proposals considered by the institution but not submitted to the CFI could support CFI's advocacy efforts for stable and predictable funding.

To that end, information on internal selection and decision-making processes for the Innovation Fund was requested from institutions. This information allowed the CFI to gauge the research community's infrastructure needs (e.g. the number and cost of submitted and non-submitted proposals) and gain insights on how institutions set priorities and make strategic choices in the selection of their projects.

An impressive total of 81 institutions submitted descriptions, summarizing the internal selection processes including timelines, stakeholders, decision-makers and key considerations for institution-led and multi-institutional projects. All submissions were carefully read by several CFI staff to identify both common and unique practices as well as key challenges. To deepen the analysis of these submissions, a qualitative data analysis was undertaken. The open text descriptions varied in length (from a half page to two pages), level of detail and content. Therefore, the analysis focused on identifying major trends rather than statistical analysis (i.e. it did not correlate findings with success rates, institution size, etc.).

We would like to thank institutions and recognize the time and effort spent on sharing with us their internal selection processes. The 81 submissions received highlighted the ongoing commitment and continued interest of institutions in ensuring CFI policies and programs remain relevant and responsive to their needs for the years to come.

RESULTS AND FINDINGS

The most readily apparent trend based on the review of these submissions is that internal selection processes are demanding and lengthy undertakings. They include multiple participants from across institutional departments (in addition to the research services offices) and comprise rigorous internal, and often external, reviews to culminate in the selection of the best and most promising projects.

- **More than one-third of the institutions started planning for the 2017 Innovation Fund prior to the draft Call for Proposals in February 2016, primarily through internal calls for Expressions of Interest (EOI), identifying emerging research opportunities and considering resubmission of 2015 Innovation Fund proposals.**

Institutions value the CFI's merit-review process and used feedback from past Innovation Fund committee reports to improve proposals for resubmission. Research services offices (RSO) promoted the 2017 Innovation Fund opportunities and internal review processes through email to deans and/or researchers, website postings and information sessions.

There is no single model for internal review processes; for example, at two thirds of institutions the process is centralized at the RSO and VP Research office, while at others it is decentralized, at least in part, with primary responsibility resting with faculties and deans. However, there were several common key considerations, at both the Notice of Intent (NOI) and proposal stages, which guided the selection of 2017 Innovation Fund projects. **Figure 1** depicts the relative frequency (illustrated by font size) of the main selection criteria. In descending order, these include alignment with strategic research plans (SRP), envelope allocation, and federal or provincial priorities. The most frequently reported project attributes sought by institutions were:

- research excellence,
- partnerships and collaborations,
- calibre of the researchers and team,
- fit with Innovation Fund assessment criteria
- academic, socio-economic or industry benefits.

Additional selection factors included the maturity of projects, recognizing emerging domains, and a project's fit with different CFI funds, in particular those projects better suited for the John R. Evans Leaders Fund.

Figure 1: Institutional considerations for the selection of Innovation Fund projects¹



¹ For the qualitative data analysis, using QDA Miner, text in each document was codified by category (e.g. selection process) and codes (e.g. centrally managed). A frequency count was then calculated to determine the occurrences of codes across cases (i.e. institutions).

ANOTHER COMMON FEATURE OF INTERNAL SELECTION PROCESSES IS THE PARTICIPATION OF MANY ACTORS FROM ACROSS CAMPUS.

- Two-thirds of institutions had internal review committees comprising RSO staff, VPs of research and faculty deans to vet EOI, NOI and/or proposals.
- Internal committees often included representatives from finance, procurement, facilities management, IT and ethics to help define projects' needs and feasibility (e.g. space or computing needs).
- In many cases, internal merit reviews also engaged institutional researchers with CFI experience (as project leaders or reviewers). Internal and external reviewers were used at different stages of the selection process, although external reviewers were primarily used at later stages of development (i.e. post NOI). Feedback from internal/external reviewers informed the strategic selection of projects as well as the development of proposals.
- Most institutions designated RSO staff and grants facilitators specifically for the Innovation Fund, occasionally providing additional funds for consultants or additional administrative support, to assist in the development of proposals.

Internal review processes are clearly dynamic and iterative, and rely on numerous institutional participants as well as external ones. A few interesting practices are listed in the textbox.

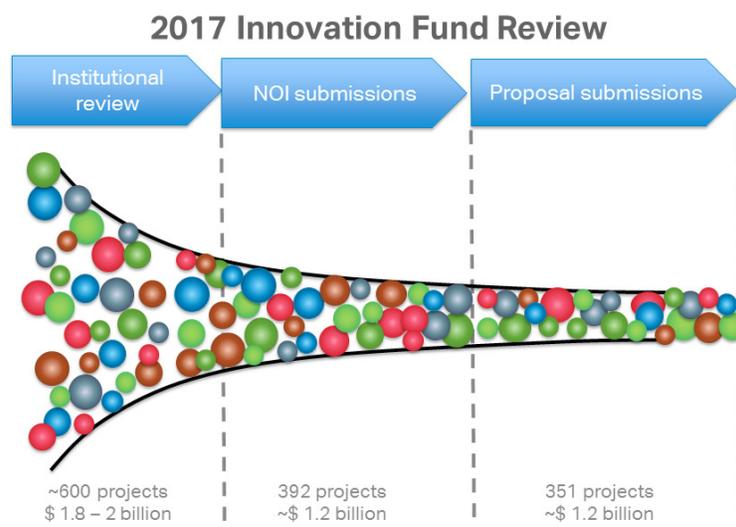
INTERNAL SELECTION PROCESS: TOP 10 INTERESTING PRACTICES

1. **"Test your concept"** – early stage, short presentations by potential applicants for institutional feedback (large university from Western Canada)
2. **"Pitch day"** – short presentations of proposals by project leaders to internal committee and other research teams (large university from Western Canada)
3. **Internal college of review** – researchers with strong peer review experience to vet internal pre-proposals (several institutions of different sizes from across Canada)
4. **Mock MAC** – internal and external reviewers meet with, and question, research teams to provide feedback for revising proposals (large university from Western Canada)
5. **Recognize and eliminate premature projects** from the selection process (medium-size university from Ontario)
6. **SWOT analysis and positioning** of Innovation Fund proposals following the NOI posting (large university from Quebec)
7. **Identify some Innovation Fund proposals** as a better fit for the John R. Evans Leaders Fund (large university from Western Canada)
8. **Ensure that previous unsuccessful Innovation Fund projects are improved** before their resubmission to CFI (large university from Western Canada)
9. **Projects risk assessment** conducted by service units including campus planning, the project management office and research services (large university from Western Canada)
10. **The published list of NOIs circulated amongst researchers** – where potential collaborations and synergies exist, researchers were encouraged to explore the possibility of merging applications (medium-size university from the Atlantic region)

The posting of NOIs was appreciated by all institutions. RSO staff and researchers used the NOI information to identify potential collaborations and synergies with other projects as well as any overlap with other projects or infrastructure. While fewer than five institutions reported using the information to merge projects and create new collaborative projects, many used the information to revise proposals, eliminate some NOIs, identify new research collaborators as well as forge potential post-award synergies and future collaborative research projects.

The number and level of requested funds at internal EOI, NOI and proposal stages were not reported consistently in the 81 submissions. It was therefore not feasible to quantify and compare the level of interest and need along the different stages of the internal process. As illustrated in **Figure 2**, using estimated numbers and total requests (\$), the number of potential projects approximately doubled the number and size ultimately submitted to this competition. The internal selection process was intensive, resulting in removal of potential projects and adjustments of budgets to avoid exceeding institutional envelopes and to select proposals of the highest merit.

Figure 2: Path from ideas to projects submission



THE ANALYSIS OF THE INTERNAL REVIEW PROCESSES AND INSIGHTS GAINED FROM THESE SUBMISSIONS INDICATE THAT:

- Although a SRP is no longer required as part of the CFI assessment process, institutions rely heavily on their research plans in the selection of Innovation Fund proposals.
- Identifying and developing strong Innovation Fund proposals requires significant time (up to a year) and effort, and often starts before a draft Call for Proposals is posted. Having predictable Innovation Fund competitions, with confirmed schedules for several years, would allow institutions to better plan their timelines and human resources needs. Consequently, internal selection processes may be shortened and the burden on the research community and research administration reduced.
- The need for research infrastructure, based on available information, clearly exceeded the available competition budget. Stable funding, with secured funding envelopes for consecutive competitions, would allow institutions to be more strategic in their research infrastructure development plans. This would enable institutions to select more mature and promising projects in the short term, while fostering nascent projects and recognizing emerging needs for subsequent competitions.

MULTI-INSTITUTIONAL PROJECTS

Institutions were also asked to describe how they planned for the submission of strong multi-institutional projects. Among the key reasons for multi-institutional collaborations were: it allowed the institution to capitalize on pre-existing collaborations; complementary expertise was available at other institutions; and, there was a desire to reduce infrastructure duplication while increasing research synergy. The genesis of multi-institutional projects resided primarily with the researchers; however, research administrators at participating institutions took part in discussions and development of proposals.

The analysis of responses indicated that there are some challenges associated with developing multi-institutional proposals, such as coordination across multiple RSOs, differences in internal timelines and deadlines and diverse selections processes. The CFI also heard at meetings of the Canadian Association of Research Administrators about challenges encountered in planning, developing and managing multi-institutional projects. To help support future collaborative endeavours, a working group was established in July 2017 to address challenges and opportunities. The working group is currently engaged with the RSO community, through CARA meetings and interest groups, in identifying potential solutions to key challenges. The group's recommendations will ultimately guide both the CFI's and the institutions' development of tools and new approaches to facilitate multi-institutional applications, and provide good practices and potential solutions to facilitate and improve interinstitutional collaborations.

In conclusion, the submissions described thorough and rigorous proposal identification and development processes, often accompanied by highly selective internal decision-making process led by institutions, their researchers, administrators and in many cases external reviewers. The key considerations in the selection of the best IF proposals were overall excellence and alignment with strategic research plans. This process is demanding, dynamic and iterative, sometimes lengthy, involving a wide range of stakeholders. Institutional submissions highlighted a myriad of good practices worthy of sharing broadly, and revealed some key institutional challenges in planning, developing and managing multi-institutional projects for which a working group of CFI staff and institutional representatives will be working together to develop new tools and approaches, with the goal of more easily managing these projects in the future.