Performance, evaluation, risk and audit framework

September 2024



Table of contents

1	Context for this framework	2
2	Organizational profile	3
	2.1 Mandate	3
	2.2 Funding and contribution agreements	3
	2.3 National objectives and expected results	3
	2.4 Principles of equity, diversity and inclusion .	4
	2.5 Values	5
	2.6 Research infrastructure	5
	2.7 Eligibility for CFI funding	5
	2.8 Funding formula	6
	2.9 Review process	6
	2.10 Program architecture	
	2.11 Logic model	
	2.12 Key stakeholders and beneficiaries	9
3	Organizational risk assessment	
	and management strategy	. 10
	3.1 Updating our risk assessment	
	and mitigation measures	
	3.2 Oversight activities	12
4	Performance measurement and	
	evaluation strategy	
	4.1 Approach	15
	4.2 Performance measurement strategy	15
	4.3 Evaluation strategy	15
Α	ppendix 1: Funding and contribution	
	agreements with the Government	
	of Canada	17
Α	ppendix 2: Performance	
	measurement framework	18

About the Canada Foundation for Innovation

With a bold, future-looking mandate, the CFI equips researchers to be global leaders in their fields and to respond to emerging challenges. Our investments in state-of-the-art tools, instruments and facilities at universities, colleges, research hospitals and nonprofit research institutions underpin both curiosity- and mission-driven research that cuts across disciplines and bridges all sectors. The research infrastructure we fund mobilizes knowledge, spurs innovation and commercialization, and empowers the talented minds of a new generation.

The Canada Foundation for Innovation respectfully acknowledges that its head office is located on the traditional, unceded territory of the Anishinaabe Algonquin People.

1100-55, rue Metcalfe Street Ottawa ON K1P 6L5 T: 613 947-6496 info@innovation.ca

© Canada Foundation for Innovation (CFI), 2024

This report should be cited as: The Canada Foundation for Innovation, 2024. Performance, evaluation, risk and audit framework. Ottawa, Ontario.

1 Context for this framework

Since it was introduced in 2008, the Canada Foundation for Innovation's (CFI) Performance, evaluation, risk and audit framework (PERAF) has served as a guide for how the organization manages risk and assesses its performance in relation to its objectives and expected results.

The PERAF applies to the CFI as a whole and includes:

- An organizational profile
- An organizational risk assessment and management strategy
- A <u>performance measurement and evaluation strategy</u> (including a plan for the ongoing collection and reporting of information on the CFI's performance).

In 2024, the CFI reviewed and updated the PERAF. This was done in the spirit of continuous improvement and given the following developments:

- The completion, in 2023, of the internal audit of the risk oversight activities for funded projects and institutions
- The adoption of a new strategic plan for 2023 to 2028
- The launch, in 2021, of the Biosciences Research Infrastructure Fund
- The launch, in 2024, of the Northern Fund.

This review included an update of:

- The CFI logic model
- The organizational risk assessment and management strategy
- The performance measurement framework and the associated evaluation strategy.

Since the review of the PERAF ensures that the activities of the CFI and the information requirements remain appropriate and relevant, and that the resulting information can be used for performance measurement, management, accountability and communication purposes, it will be revised as necessary.

The 2024 PERAF replaces the PERAF approved by the CFI's Board of Directors in March 2020.

2 Organizational profile

The CFI was created in 1997 to provide researchers with the facilities and equipment they need to conduct leading-edge research. The Government of Canada's ongoing support has allowed the CFI to adjust its program architecture to meet the evolving research infrastructure needs of Canada's research institutions while continuing to produce social, economic, environmental and health benefits for Canadians.

In the 2018 federal budget, the Government of Canada established permanent funding for the CFI at an ongoing level of up to \$462 million per year starting in 2023–24. In the 2021 federal budget the Government of Canada announced an investment of \$500 million to launch the Biosciences Research Infrastructure Fund as part of Canada's Biomanufacturing and Life Sciences Strategy.

2.1 Mandate

The mandate of the CFI is to increase the capability of Canada's universities, colleges, research hospitals and non-profit research organizations to carry out high quality research by investing in research infrastructure.

2.2 Funding and contribution agreements

The CFI operates under two funding agreements and four contribution agreements with the Government of Canada, under the authority of Innovation, Science and Economic Development Canada (ISED) and the Minister of Innovation, Science and Industry (see Appendix 1: Funding and contribution agreements with the Government of Canada).

2.3 National objectives and expected results

The national objectives are established by the Government of Canada and are to be achieved by the CFI, while the expected results are the results intended to be achieved by the recipient institutions of CFI funding. These objectives and results are closely aligned and are interdependent.

2.3.1 National objectives

The national objectives, as defined in the CFI's funding and contribution agreements, have slightly evolved since 1997.

The 2019 Contribution Agreement states that "the Foundation shall have the following objectives:

- a. Support economic growth and job creation, as well as health and environmental quality through innovation.
- b. Increase Canada's capability to carry out important world-class scientific research and technology development.
- c. Expand research and job opportunities by providing support through research infrastructure for the development of highly qualified personnel.
- d. Promote productive networks and collaboration among Canadian universities, colleges, research hospitals, non-profit research institutions and the private sector."

The 2022 Contribution Agreement states that "the Foundation shall have the following objectives, in alignment with the Strategy [Canada's Biomanufacturing and Life Sciences Strategy]:

a. Ensure that researchers have the specialized equipment and research facilities needed to conduct cutting-edge research and technology development to support Canada's pandemic readiness and

- the growth of the biomanufacturing and life sciences sector.
- b. Support the training and development of researchers and highly qualified personnel to enhance the biomanufacturing and life sciences sector's ability to support pandemic readiness.
- c. Promote networks and collaboration among Canadian universities, colleges, research hospitals, non-profit research institutions and the private and public sectors."

2.3.2 Expected results

The 2019 Contribution Agreement states that "In using the Amount, the Foundation is expected to help enhance the capacity of Ultimate Recipients to:

- a. attract and retain the world's top research talent;
- b. train the next generation of researchers;
- c. enable researchers to undertake world-class research and technology development that lead to social, economic and environmental benefits for Canada; and
- d. support private sector innovation and commercialization."

The 2022 Contribution Agreement states that "In alignment with the Strategy [Canada's Biomanufacturing and Life Sciences Strategy], the Foundation, in using the Amount, is expected to help enhance the capacity of Ultimate Recipients to achieve the following results:

- a. world-class research is undertaken to advance Canada's domestic capacity to supply vaccines, therapeutics and diagnostics, in order to support Canada's readiness and response to pandemics and other emerging health threats.
- b. researchers and highly qualified personnel are developed, attracted to and retained within the biomanufacturing and life sciences sector.
- c. networks and collaboration among Canadian universities, colleges, research hospitals, non-profit research institutions and the private and public sectors are strengthened in the areas of biomanufacturing and life sciences.
- d. the translation of research into private sector innovation and commercialization in the biomanufacturing and life sciences sector is accelerated.
- e. health, economic and social benefits in the areas of biomanufacturing and life sciences are achieved for Canada."

2.4 Principles of equity, diversity and inclusion

The CFI is committed to the principles of equity, diversity and inclusion. In all our activities, we recognize that a breadth of perspectives, skills and experiences contributes to excellence in research.

Equity: We aim to ensure all CFI-eligible institutions have the opportunity to access our programs and research infrastructure through our well-established, fair and impartial practices.

Diversity: We value attributes that allow institutions and their researchers — from any background and from anywhere — to succeed. These include individual attributes such as gender, language, culture and career stage; institutional attributes such as size, type and location; and attributes that encompass the full spectrum of research, from basic to applied and across all disciplines.

Inclusion: We encourage a culture of collaboration and partnership which includes contributions from and engagement among diverse groups of people, institutions and areas of research to maximize the potential of Canada's research ecosystem.

We believe that nurturing an equitable, diverse and inclusive culture is the responsibility of every member of the research ecosystem, including funders, institutions, researchers, experts and reviewers.



2.5 Values

For our part, we strive to be:

Responsible	Collaborative	Innovative
	How we live it externally	
We remain transparent and accountable by monitoring and communicating the outcomes of our activities and investments.	We are client-focused, providing effective, efficient services and actively consulting with our stakeholders.	We believe in a bright future for Canada's research community. Our investments allow researchers to think big and have a profound, transformative impact on society.
	How we live it internally	
We are objective, ensuring the integrity and independence of our processes and decisions.	We foster teamwork, valuing and considering the opinions, and trusting the skills and knowledge, of our colleagues.	We bring fresh ideas into a work environment that fosters excellence and creative thinking.

2.6 Research infrastructure

The infrastructure funded by the CFI includes state-of-the-art equipment, laboratories, databases and facilities necessary to conduct research. CFI-funded infrastructure fosters collaboration among the academic, private, public and non-profit sectors and among researchers in various disciplines. Infrastructure makes a permanent impact on institutions because it builds long-term capacity.

2.7 Eligibility for CFI funding

To participate in our funding programs, an institution must first be eligible to apply for, receive and administer CFI funding.

The types of institutions that can become eligible are:

- Universities
- Colleges
- Research hospitals
- · Research institutes
- Non-profit research institutions that carry out their activities primarily in Canada.

To be eligible, an institution must:

- Be situated in Canada
- Be engaged in research and research training
- Demonstrate its capacity to conduct and support research by meeting the requirements set out in section 3.1.1 Eligibility requirements: universities, colleges, research hospitals and research institutes or 3.1.2 Eligibility requirements: non-profit research institutions of the <u>CFI's Policy and</u> program guide.

2.8 Funding formula

The CFI generally funds up to 40 percent of a project's research infrastructure costs. However, through the Biosciences Research Infrastructure Fund and the Major Science Initiatives Fund (MSIF) it can fund up to 60 percent of a project, and through the Northern Fund, it can fund up to 50 percent. CFI funding is then leveraged by the institution to attract the remaining investment from partners in the public, private and non-profit sectors. The CFI's multiyear funding programs allow institutions to engage in long-term strategic research planning.

In addition to supporting research infrastructure costs, the CFI contributes to the operating and maintenance costs of CFI-funded research infrastructure through the Infrastructure Operating Fund.

2.9 Review process

All proposals requesting CFI funding are subject to the CFI's review process.

- In the case of competition-based funds, the review process will determine the degree to which a proposal satisfies the criterion standards relative to competing proposals.
- In the case of the John R. Evans Leaders Fund, which operates through institutional envelopes, the review process will determine the degree to which a proposal satisfies the criteria of the funding program.

The CFI Board of Directors makes final funding decisions based on recommendations from the review committees.

2.10 Program architecture

The CFI's funding architecture is designed to deliver on our mandate by responding to the current, future and evolving needs of Canadian research institutions and their researchers. The CFI supports all areas of research, and because it works directly with institutions rather than with individual researchers, institutions can ensure that their applications for funding are aligned with their own strategic research plans.

2.10.1 Biosciences Research Infrastructure Fund

The Biosciences Research Infrastructure Fund (BRIF) supports the bioscience infrastructure needs of postsecondary institutions and research hospitals by providing high-performance tools, innovative research spaces and biocontainment facilities. Support from this funding program is expected to advance the Government of Canada's Biomanufacturing and Life Sciences Strategy by strengthening the research capacity of Canada's biomanufacturing and life sciences ecosystem.

The CFI held two competitions under this funding program:

- 1. BRIF Biocontainment and large-animal facilities
- 2. BRIF Partnership with Stage 2 of the Canada Biomedical Research Fund

2.10.2 College Fund

The College Fund supports projects that enhance the capacity of Canadian colleges to carry out applied research and technology development and foster partnerships that generate innovative products, processes or services that address the social, business, health or environmental needs of a Canadian industry or community. The CFI holds annual College Fund competitions.

2.10.3 Exceptional Opportunities Fund

The Exceptional Opportunities Fund is designed for those very few instances when an exceptional research opportunity would be missed if a project had to wait to undergo the normal course of a national competition before a decision could be rendered.

2.10.4 Infrastructure Operating Fund

The Infrastructure Operating Fund (IOF) helps cover a portion of the operating and maintenance costs of CFI-funded research infrastructure to ensure its optimal use. An institution's IOF allocation is calculated as 30 percent of the CFI contribution for eligible projects.

2.10.5 Innovation Fund

The Innovation Fund supports a broad range of research programs including those in natural sciences and engineering, health, social sciences, humanities and the arts, as well as interdisciplinary research. Projects funded through the Innovation Fund will help Canada remain at the forefront of exploration and knowledge generation while making meaningful contributions to generating social, health, environmental and economic benefits and addressing global challenges. The CFI holds Innovation Fund competitions at regular intervals of 24 to 30 months.

2.10.6 John R. Evans Leaders Fund

The John R. Evans Leaders Fund (JELF) is a critical strategic investment tool designed to help institutions attract and retain the very best of today's and tomorrow's researchers by providing ongoing and consistent support. It is an institutional allocation-based fund and consists of five different funding streams: one of which is unaffiliated and four of which are in partnership with other organizations. For the partnership streams, the CFI receives proposals according to the schedules of the partner organizations. For the unaffiliated stream, the CFI receives proposals three times per year.

2.10.7 Major Science Initiatives Fund

The Major Science Initiatives Fund (MSIF) provides support for the ongoing operating and maintenance needs of research facilities of national importance. It promotes responsible stewardship by ensuring these facilities adopt best practices for their management and governance.

2.10.8 Northern Fund

The Northern Fund will provide eligible institutions and organizations in Northern Canada with research infrastructure that will lay the foundation for research projects that address the priorities of the region and its communities. These research projects will be conceived, developed, led and managed by Northern institutions, researchers and communities.

Find out more about the CFI's funding programs.

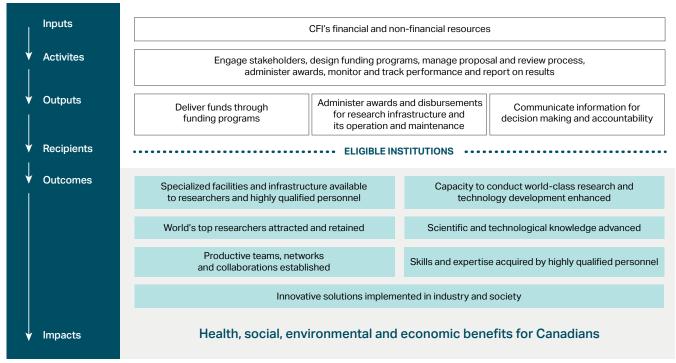
2.11 Logic model

The CFI logic model identifies the relationships between the organization's inputs, activities and outputs, and the different outcomes that are achieved by the recipient institutions as a result of research infrastructure funding (Figure 1). It is through these inputs, activities and outputs that the CFI enables eligible institutions to make progress on their expected results and for the CFI to achieve its objectives.

Not all expected results and objectives are explicitly listed in the CFI logic model since many are interdependent and overlapping and it is therefore clearer to have some of these captured through broader outcome and benefit statements.

Not depicted in the model are important considerations such as external influences and risks such as availability of funding (i.e., partner funding to complement CFI funding and the level of excellence of submitted proposals). See 3 Organizational risk assessment and management strategy.

Figure 1: The Canada Foundation for Innovation's logic model



2.11.1 Inputs, activities and outputs

Inputs are the financial and non-financial resources used by CFI to increase the capability of eligible institutions to carry out high quality research.

The **primary activities** of the CFI include funding program design and delivery and oversight of funded projects.

The activities result in **outputs** such as delivering funding programs, administering awards and disbursements, and communicating information for decision making and accountability — all of which are directly within the purview of the CFI.

2.11.2 Outcomes

The innovative research that results from the confluence of world-class infrastructure and leading researchers results in a vibrant ecosystem with new knowledge and discoveries which, in turn, generates health, social, environmental and economic benefits for Canadians. Outcomes include:

- Specialized facilities and infrastructure made available to researchers and highly qualified personnel (HQP) The research infrastructure enables researchers and HQP to make discoveries and come up with inventions such as new technologies, new vaccines and new industrial processes.
- Capacity to conduct world-class, multidisciplinary and applied research enhanced The research
 infrastructure, along with planning for its optimal use, enriches the training environment at eligible
 institutions and enhances their ability to compete globally in research and technology development.
- World's top researchers attracted and retained The research infrastructure enables eligible institutions to attract and retain researchers who are highly productive and recognized in their respective fields.
- Scientific and technological knowledge advanced The research infrastructure mobilizes research teams to produce, collect, analyze and interpret data that advances scientific and technological knowledge and permits new discoveries and paradigms.

- Productive teams, networks and collaborations established The research infrastructure
 enables multidisciplinary and multi-sectoral communities of users to come together, building
 networks and enhancing collaboration.
- Skills and expertise acquired by highly qualified personnel The research infrastructure allows students, postdoctoral fellows, other trainees and technical staff to develop skills in a world-class research environment and gain knowledge from leading researchers in their fields.
- Innovative solutions implemented in industry and society The research infrastructure
 contributes to the integration and application of new knowledge, enabling the adoption of innovative
 policies, practices, products and services.

2.12 Key stakeholders and beneficiaries

The CFI has a number of key stakeholders and beneficiaries.

2.12.1 Beneficiaries

Universities, colleges, research hospitals, research institutes, and non-profit research institutions that carry out their activities primarily in Canada — Research infrastructure projects funded by the CFI are under the control of their respective institutions. This support helps these institutions carry out world-class research and technology development that benefits Canadians.

2.12.2 Stakeholders

Researchers — Access to state-of-the-art infrastructure enables researchers to conduct leading-edge work. It also serves to attract and retain top minds at Canadian institutions and promote productive research collaborations and networks.

Highly qualified personnel (HQP), including postdoctoral fellows, graduate students, undergraduates and technicians or professionals — CFI-funded infrastructure provides institutions with opportunities to train HQP in state-of-the-art environments with world-class researchers. CFI funding also enables eligible institutions to attract and retain technical personnel for the operation and maintenance of the research infrastructure.

Governments and funding organizations — The CFI is a key component of the Government of Canada's science and innovation portfolio. The CFI advances the objectives of the Government of Canada and works alongside federal and provincial governments and in partnership with federal and provincial granting agencies and organizations to support and strengthen the research environment in Canada.

Private-sector firms and non-profit organizations — These stakeholders are contributing partners to CFI-funded projects and users of the knowledge generated from these projects. The research coming from CFI-funded labs and facilities helps develop new or improved products, processes or services, and fosters the commercialization of discoveries.

The Canadian public — The Canadian public has a stake in the CFI since taxpayer dollars are used to fund the CFI's programs and operations. The public is also the ultimate beneficiary of the research that flows from CFI-funded infrastructure and contributes to the prosperity and quality of life of Canadians.

3 Organizational risk assessment and management strategy

3.1 Updating our risk assessment and mitigation measures

In consideration of the significant and rapid changes in both internal and external risk environments due to a challenging labour market, geopolitical disruptions and high inflation, among other factors, the CFI refreshes its risk assessment and management strategy annually. This is done to help ensure that current and anticipated changes in risks and risk levels are appropriately reflected in the CFI's enterprise risk monitoring and reporting and to provide a more current baseline measure to address the changing risk landscape.

3.1.1 Methodology

Risks are assessed in the context of events or circumstances that could affect the achievement of the CFI's objectives and strategic directions, and the outcomes described in the logic model.

For the most recent update, we conducted the risk assessment as follows:

- Updated existing strategic risk inventory based on: changes to CFI strategies and priorities; general economic and COVID-19-related risk factors; group workshop with management
- · Gathered the views of all Board representatives through interviews and a survey to identify risks
- Assessed these risks through workshops with members of CFI management. In the workshops,
 participants were asked to rate the likelihood and impact of each risk, giving consideration to the
 existence and effectiveness of any controls or management practices related to these risks. Impact
 and likelihood were each rated anonymously using a five-point scale.

The CFI typically does a **formal** review of key risks and mitigation measures every three years or more frequently if there are significant changes to the risk landscape. This exercise is facilitated by an internal audit firm and informs the internal risk audit plan. An **informal** review of the key risks and mitigation measures is done annually by the CFI's management team and feeds into the organization's annual corporate plan.

3.1.2 Key risks and mitigation measures

Nine risks spanning four different risk areas were identified as having higher than average potential likelihood of occurrence and potential impact (see sections 3.1.2.1 through 3.1.2.4).

3.1.2.1 Strategic risks

Alignment with stakeholder expectations: Risk that the CFI is not agile enough to align its activities with the evolving needs and expectations of its stakeholders

Mitigation measures:

- We periodically assess funding mechanisms for how they are addressing stakeholder needs and, when necessary, we make appropriate adjustments.
- We undertake regular, ongoing discussions with stakeholders on the requirements for research infrastructure, the leveraging of benefits and impacts of CFI investments.
- We undertake outreach and communications activities, including disseminating success stories
 and results of performance evaluation assessments, to demonstrate to parliamentarians and
 government decision makers how our research infrastructure funding responds to both government
 priorities and the needs of the research community.

3.1.2.2 Institutional/operational risks

Matching funding: Risk that matching funding is not secured or sustained

Mitigation measures:

Major partners have opportunities to provide input on activities, processes and funding mechanisms. We consider their priorities in the proposal review process.

We communicate to provinces and territories the value of our 40 percent funding model, as well as our competition schedules, to assist them in their planning.

Institutional capacity and financial health: Risk that institutions cannot implement or sustain current and/or future CFI-funded research infrastructure projects

Mitigation measures:

- We assess the capacity of institutions to manage CFI funds when determining the institution's eligibility to apply for them. Throughout the lifecycle of each project, we use a risk-based approach to determine the extent of our oversight activities.
- The institution's plans for sustainability of the research infrastructure are assessed through the review process.
- We provide funding competitions at regular intervals, which gives institutions the opportunity to choose optimal timing to submit proposals.

Project delays: Risk of delays in project implementation

Mitigation measures:

• We monitor the implementation of projects and follow up with institutions to address any potential project delays.

Reviewer engagement: Risk of reduced engagement of reviewers

Mitigation measures:

- We reduce the burden on reviewers by producing clear, concise competition documents and by tailoring our review process to the risk and complexity of each project.
- Where appropriate, we hold committee meetings virtually.
- For major competitions, we group similar projects for joint review to minimize the total number of reviewers required.
- We coordinate with major funding partners to reduce duplication of review efforts.
- We do not solicit individuals who have recently participated in a review process for us.

3.1.2.3 Information technology/information management risks

Security: Risk of security breach and loss of, or inappropriate access to, personal or confidential data

Mitigation measures:

- We have a multiyear contracted partnership with a cybersecurity firm to conduct reviews, provide guidance, stay abreast of the cybersecurity landscape and implement best practices.
- We have developed a formal cybersecurity incident response plan and have updated our corporate crisis communications plan to be prepared in the event of a cybersecurity incident.
- We work with the Canadian Centre for Cyber Security to monitor the threat landscape and keep updated on best practices.
- We maintain a cybersecurity awareness program for staff, which includes regular simulated phishing tests and mandatory training.

3.1.2.4 Human resource risks

Wellbeing of employees: Risk of a decline in employee engagement and wellbeing



Mitigation measures:

- We periodically conduct surveys to gauge employee satisfaction and gather feedback on the work environment and employee experience.
- Employees have flexible hours and unlimited access to an employee assistance program.
- Management and human resources continue to participate in webinars and monitor best practices that promote employee engagement and wellbeing.

Attraction and retention of talent: Risk that the CFI cannot attract and retain qualified employees **Mitigation measures:**

- We monitor the employment landscape and implement good practices adopted by other organizations.
- We offer competitive salaries and benefits.
- We promote work-life balance and have a flexible hybrid work policy.

Corporate continuity: Risk of losing corporate memory

Mitigation measures:

- We build in redundancy for key positions.
- We document all positions with a profile.

3.2 Oversight activities

This section provides a description of the CFI's oversight activities. Overall, risk and performance are monitored through an integrated strategy which involves monitoring the achievement of established outputs and outcomes (see "4 Performance measurement and evaluation strategy"), as well as monitoring institutional compliance and project results through detailed operational and financial procedures.

3.2.1 Project monitoring

The CFI relies on a variety of activities for project monitoring, including monitoring recipient institutions' compliance with terms and conditions of funding.

The CFI has adopted a risk-based approach for its oversight of funded projects. The nature and extent of the CFI's oversight activities are tailored to the risks facing each institution and project, since the risks vary greatly from one institution or project to the next. In doing so, the CFI can benefit from more effective and efficient mechanisms.

To help identify project-related risks and establish an appropriate level of oversight for each project, the CFI has developed the Tool for risk assessment and management (TRAAM). This tool has two components: the CFI's risk assessment and a summary of the CFI's oversight activities commensurate with the identified project-related risks.

The CFI works collaboratively with each institution in the management of project-related risks. Input from the institution on its management and oversight activities is incorporated into the TRAAM; this may influence the CFI's risk assessment and its level of oversight activities. Over the course of each project, we revisit our risk assessment annually. We also modify our oversight activities to reflect any changes in risks for the project.

3.2.2 Financial trend analysis

In the fall of each year, we perform an annual financial trend analysis for each institution with active CFI projects to inform our risk-based approach for the oversight and administration of awards. We consider institutional spending trends, project delays and our overall experience with each institution.



3.2.3 Approval of infrastructure changes

Recipient institutions must use their CFI funds to purchase or develop the infrastructure and to cover the eligible costs agreed to by the CFI under their award agreement. In a small number of instances, changes to an infrastructure project may be necessary. In these instances, the institution must ensure that the proposed change is acceptable.

Prior approval from the CFI is required if the cost of a new item is significant or for any change that has a negative impact on the project and its research objectives regardless of cost implications. We also monitor timelines for the acquisition of the infrastructure. The institution must notify the CFI if there is a change in the designated project leader or if the institution is unable to carry out or complete the project.

3.2.4 Financial reporting

Financial reports provide information on individual project costs, funding and timelines for the acquisition of the infrastructure. Project timelines are reviewed and follow-up procedures are performed if there are significant delays in the acquisition of the infrastructure. The financial reporting frequency varies based on project complexity and risk. It ranges from quarterly reporting to reporting every two years.

In its final financial report for each project, the institution must describe all changes to the infrastructure from the initial proposal. The CFI reviews all spending related to a project, including infrastructure changes and new items (if any), following the receipt of the final financial report, to ensure they are acceptable.

3.2.5 Contribution audits and financial reviews

The CFI regularly analyzes the risks associated with projects and implements targeted review procedures to ensure that funding received by institutions has been used in accordance with the terms and conditions of award agreements, as well as applicable policies and guidelines.

The risk level of each project determines the scope, timing, nature and extent of audit activities. These are carried out by external auditors or by CFI staff (see Table 2).

Table 2: Summary of the CFI's contribution audit methodology

Infrastructure projects

Projects with a CFI contribution of more than \$10 million

All projects with a CFI contribution exceeding \$10 million are automatically subject to an audit. The first audit activities related to these projects normally take place once at least half the costs have been incurred. The need for additional audit activities is determined based on the risk of the project.

Projects with a CFI contribution of \$10 million or less

The risk of the project determines if there is a need for an audit. It also determines the nature, scope and extent of the audit activities, as well as timing of these activities. High risk projects are audited. In addition, financial reviews are conducted annually on a couple of projects selected from lower risk projects, to ensure that the CFI obtains appropriate coverage of all its funded projects.

Infrastructure Operating Fund (IOF)

The CFI reviews IOF annual reports for each institution and performs follow-up procedures when concerns are noted.

3.2.6 Other oversight activities

Depending on the risks identified through the TRAAM for specific projects, the CFI may perform other oversight activities. These could include, for example, project implementation meetings, project status reports, midterm reviews, ad-hoc visits, etc. These activities are tailored to each project and help ensure the risks identified are adequately managed.



3.2.7 Internal auditing

The internal audit function provides the Board of Directors (through the Audit and Finance Committee) and CFI management with sufficient and timely assurance and consulting services on aspects of the CFI's risk management, control and governance practices.

The internal audit function is responsible for the following activities:

- A risk assessment to determine areas of significant risk facing the organization
- Development of risk-based internal audit plans in consultation with the management team, to be approved by the Board of Directors (through the Audit and Finance Committee)
- Development of terms of reference for every audit
- Quality control throughout the audit engagements
- Preparation of final internal audit reports for approval by the Board of Directors (through the Audit and Finance Committee).

The CFI develops and updates a risk-based internal audit plan and uses an external firm to carry out its internal audit activities. Internal audits are performed in accordance with this plan as approved by the Board of Directors through the Audit and Finance Committee.

Results of contribution audit activities and other external audits and reviews as well as changes in circumstances are considered on an ongoing basis to determine whether significant changes in risks facing the CFI have occurred and to assess whether any modifications to planned internal audit activities are required.

4 Performance measurement and evaluation strategy

Performance measurement and evaluation are complementary and mutually reinforcing activities. Effective performance measurement systems support ongoing organization-wide monitoring and are important data sources for a range of evaluation activities. According to the Treasury Board of Canada Secretariat, evaluation provides a more in-depth understanding of why results were or were not achieved.

The CFI's performance measurement and evaluation strategy describes how the organization effectively tracks and assesses its performance in relation to its objectives and expected results. The CFI gathers, analyzes and reports accurate, consistent and timely information that demonstrates the need for and relevance of the CFI, its funds and the outcomes of its investments to the CFI Board of Directors, the Government of Canada and the Canadian public.

4.1 Approach

The CFI recognizes its responsibility in demonstrating the benefits of its investments to assess the efficiency of public spending, and to assess its contribution to achieving social, economic, environmental and health objectives. However, there are many complexities associated with measuring and evaluating the outcomes of CFI investments. Not only are research and innovation inherently risky, but outcomes and benefits linked to research infrastructure are difficult to measure (e.g., issues related to time lag, attribution, etc.). As such, the CFI uses a range of data and assessment approaches to evaluate progress at the organizational level through to the societal level.

4.2 Performance measurement strategy

Performance measurement refers to the systematic collection and analysis of information and data that are used to track and assess how the CFI is progressing toward achieving its objectives and expected results. Key performance indicators are measured regularly to provide the CFI with information for management, learning and accountability purposes, as well as to inform evaluation activities.

The performance measurement framework is aligned to the organization-wide logic model and provides details on key performance measures and responsibility for data collection. These performance measures, presented in the table in Appendix 2: Performance measurement framework, inform annual project reporting, monitoring activities, outcome measurement, evaluations and other outcome studies at the CFI.

To support information requirements for senior management as well as evaluation, performance measurement is conducted on an ongoing basis.

4.3 Evaluation strategy

We have considered current strategic priorities and information requirements of the CFI to develop the organization's evaluation strategy. We may identify and conduct other studies in response to emerging interests and priorities. Although not described within the evaluation strategy, other activities within the CFI also address accountability and may inform studies, such as monitoring and audit activities by the organization's finance team and consultations by its programs team. This section further details how the CFI supports its need for performance and relevance information.

4.3.1 Evaluation

Evaluation refers to the systematic and objective assessment of an initiative, including its design, implementation and results. More specifically, an evaluation will examine the relevance and fulfillment of objectives, the effectiveness, the efficiency, and the benefits of an initiative. It should provide information that is credible and useful and, where appropriate, make recommendations to guide the organization's decision-making process.

The **effectiveness** is defined as the extent to which an organization, policy, program or initiative is meeting its expected results while the **efficiency** is the extent to which an organization, policy, program or initiative produces outputs in relation to resources used.

4.3.2 The approach

The CFI periodically undertakes various types of evaluation to support organizational learning, inform operational and strategic decisions, and ensure the proper use of public funds. It participates in the evaluation of joint or collaborative programs such as the Canada Research Chairs Program. It also evaluates the design and delivery of its own funding programs, activities and initiatives.

Developed annually, the performance, analytics and evaluation plan takes into account the CFI's current strategic priorities and key reporting requirements. The plan includes activities to support evaluations led by the Innovation, Science and Economic Development (ISED) in accordance with the contribution agreements between the CFI and the Government of Canada. These evaluations include: a) an evaluation of the organization, and b) the joint evaluation (conducted by ISED, the Tri-agency Institutional Programs Secretariat and the CFI) of the partnership between the Biosciences Research Infrastructure Fund and the Canada Biomedical Research Fund.

Appendix 1: Funding and contribution agreements with the Government of Canada

Year of signing of the funding or contribution agreement	Agreement details
1997	The CFI's first funding agreement specified the conditions under which all funds allocated to the CFI between 1997 and 2009, totalling \$4.39 billion, were to be distributed to eligible recipients. These sums generated an additional \$1.7 billion in interest income that the CFI directed to project funding and operational expenditures.
2010	In July 2010, the CFI signed a second funding agreement with the Government of Canada. It provided the CFI with \$600 million, which had been allocated in the 2009 federal budget and has now been committed by the CFI.
2014	In March 2014, the CFI signed a contribution agreement with the Government of Canada for \$499.85 million allocated through the Economic Action Plan 2012. The CFI has committed all the funding available under this agreement.
2015	In September 2015, the CFI signed a contribution agreement with the Government of Canada for \$1.33 billion. The funding competitions flowing from this contribution agreement are completed.
	In January 2019, the CFI signed a contribution agreement, that represented a fundamental change in the way the Government of Canada invests in research infrastructure. Following the announcement in the 2018 federal budget, the CFI transitioned to a permanent funding model that took effect in 2023–24.
2019	Through the 2019 Contribution Agreement the Government of Canada provided the CFI with \$4.31 billion over 13 years commencing in 2018–19, including permanent funding at an ongoing level of up to \$462 million per year starting in 2023–24. That contribution agreement has been amended on four occasions since 2019, with the most recent ratified in 2021–22. We are currently delivering funding competitions according to this contribution agreement.
2022	In March 2022, the CFI signed a contribution agreement with the Government of Canada for \$495.96 million to deliver the Biosciences Research Infrastructure Fund (BRIF) over seven years ending in fiscal year 2027–28. The funding competitions flowing from this contribution agreement were completed by the end of the 2023–24 fiscal year and the projects are underway.

Appendix 2: Performance measurement framework

	Performance indicator	Department within the CFI responsible for data collection
Context	•	
	Amount of federal granting agency funding	Performance, Analytics and Evaluation (PAE)
Research funding environment	CFI disbursements as a percentage of federal granting agency funding	PAE and Finance
	CFI commitments for new awards as a percentage of federal granting agency funding	PAE and Finance
Inputs		
	Percentage of Directors who attended Board meetings	Secretary to the Board and PAE
	Percentage of Members who attended the annual meeting	Secretary to the Board and PAE
	Board of Directors' self-evaluation	Secretary to the Board and PAE
	Degree of the Board of Directors' awareness of the CFI's mandate, objectives and strategic pillars	Secretary to the Board and PAE
	Federal budget allocations to the CFI	PAE
	Amount of federal government payments made to the CFI	Finance
CFI's financial and	The CFI's annual operating expenses	Finance
non-financial resources	Operational expenses as a percentage of disbursements to eligible institutions	Finance
	CFI operating costs as a percentage of government funding received that year	Finance
	Number of full-time staff members	Human Resources (HR) and PAE
	Training expenses to salary and benefits	HR and PAE
	Annual staff turnover rate	HR and PAE
	Average length of service	HR and PAE
	Level of staff engagement	Management
	Level of staff satisfaction	Management

	Performance indicator	Department within the CFI responsible for data collection
Activities		
	Number of events and outreach activities	PAE, External Relations and Communications (ERC), Finance, Programs and Planning, and senior management
	Full proposals received	Programs and Planning
	Rate of use of JELF allocations	Programs and Planning, and Finance
Engage stakeholders, design funding programs, manage proposal and review process,	Rate IOF allocation was paid out	Programs and Planning, and Finance
administer awards, monitor and track performance,	Percentage of research team members who are members of designated groups	PAE
and report on results	Time to finalization for projects valued at up to \$1M	PAE
	Time to finalization for projects with a value exceeding \$1M	PAE
	Percentage of infrastructure projects that reach operational status by anticipated project end date	PAE
	Percentage of financial reports and project progress reports received by CFI deadlines	Finance and PAE
Outputs		
Deliver funds through	Level of satisfaction with program design	Management and PAE
funding programs	Level of satisfaction with program delivery	Management and PAE
	Number of new awards by funding program	Programs and Planning, and Finance
	Amount of CFI commitments for new awards by funding program	Programs and Planning, and Finance
	Percentage of successful applicants by designated group	PAE
Administer awards and disbursements for research infrastructure and its operation	Percentage of applications to the CFI with project/team leaders from underrepresented groups that are awarded funding (i.e., success rate)	PAE
and maintenance	Percentage of infrastructure project costs leveraged	Finance
	Number of awards with disbursements	Finance
	Percentage of actual to projected disbursements to institutions	Finance
	Percentage of operating and maintenance costs (O&M) to infrastructure funding disbursed	Programs and Planning, and Finance

	Performance indicator	Department within the CFI responsible for data collection
	Number of published editorials	ERC
	Number of unique visitors to Innovation.ca	ERC
	Number of email subscribers	ERC
	Open rate of email communications	ERC
Communicate information	Email communication engagement rate	ERC
for decision making and accountability	Number of social media followers	ERC
·	Social media engagement rate	ERC
	Number of CFI mentions in the media	ERC
	Level of client satisfaction	Management and PAE
	Level of stakeholder satisfaction	Management and PAE
Outcomes		
Specialized facilities and infrastructure available	Percentage of projects reporting "Highly specialized research equipment" with the status "useful" or "state-of-the-art"	PAE
to researchers and highly qualified personnel	Total number of CFI-funded research infrastructures	PAE
	Percentage of early career researchers involved in CFI-funded projects	PAE
World's top researchers attracted and retained	Number of researchers attracted to the institution due to the CFI-funded research infrastructure	PAE
	Number of researchers retained by the institution due to the CFI-funded research infrastructure	PAE
Capacity to conduct world-	Rating of the quality of the CFI-funded research infrastructure, by type	PAE
class, multidisciplinary and applied research enhanced	Extent to which the CFI-funded research infrastructure was used	PAE
	Number of researchers outside the institution advancing their research using the CFI-funded research infrastructure	PAE
Productive teams, networks and collaborations established	Percentage of private, public and not-for-profit sector research infrastructure users	PAE
	Percentage of research infrastructure users from outside of Canada	PAE
Skills and expertise acquired by highly qualified personnel	Percentage of projects reporting a positive impact of the CFI-funded research infrastructure on the quality of the training environment	PAE
	Number of trainees using the CFI-funded research infrastructure as a key resource	PAE

	Performance indicator	Department within the CFI responsible for data collection
Scientific and technological nowledge advanced	Number of research outputs enabled by the CFI-funded research infrastructure	PAE
	Percentage of projects reporting knowledge mobilization activities	PAE
	Number of intellectual property rights linked with the CFI-funded research infrastructure	PAE
Innovative solutions	Number of projects reporting at least one license agreement related to CFI-funded research infrastructure	PAE
	Number of spin-off companies created in connection with CFI-funded infrastructure	PAE
implemented in industry and society	Percentage of projects reporting at least one type of benefit	PAE
	Number of jobs created in connection with CFI-funded infrastructure	PAE
	Number of connections made through the Research Facilities Navigator	ERC